

Document of  
The World Bank

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Report No: PAD 1180

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US\$200 MILLION

TO THE

NATIONAL DEVELOPMENT CORPORATION OF THE ORIENTAL REPUBLIC OF  
URUGUAY

FOR A

DROUGHT EVENTS' IMPACT MITIGATING INVESTMENT PROJECT FINANCING

November 5, 2014

Macroeconomic and Fiscal Management Global Practice  
Latin American and the Caribbean Region

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## CURRENCY EQUIVALENTS

Exchange Rate Effective as of October 31, 2014  
Currency Unit = Uruguayan Peso (\$U)  
\$U23.98 = US\$1

## FISCAL YEAR

January 1 – December 31

## ABBREVIATIONS AND ACRONYMS

ADME	Electricity Market Administrator	<i>Administración del Mercado Eléctrico</i>
BCU	Central Bank of Uruguay	<i>Banco Central de Uruguay</i>
BROU	Bank of the Eastern Republic of Uruguay	<i>Banco de la República Oriental de Uruguay</i>
CAT DDO	Catastrophe Risk Deferred Drawdown Option	<i>Opción de Desembolso Diferido para Riesgo por Catástrofes</i>
CMEEG	Conditional Expected Tail Losses	<i>Pérdida Condicional Esperada</i>
	Annual Expected Cost of Meeting the Demand	<i>El costo anual total de suministro de la demanda</i>
CND	National Development Corporation	<i>Corporación Nacional para el Desarrollo</i>
CONAFIN	National Financing Corporation of Investment Funds	<i>Corporación Nacional Financiera de Fondos de Inversión</i>
AFISA		
CPIA	Country Policy and Institutional Assessment	<i>Política del País y Evaluación Institucional</i>
CPS	Country Partnership Strategy	<i>Estrategia de Alianza con el País</i>
DPL-DDO	Development Policy Loan with a Deferred Drawdown Option	<i>Préstamo para Políticas de Desarrollo con Opción de Desembolso diferido</i>
ECLAC	Economic Commission for Latin America	<i>Comisión Económica para Latinoamérica</i>
FDI	Foreign Direct Investment	<i>Inversión Extranjera Directa</i>
FEE	Energy Stabilization Fund	<i>Fondo de Estabilización de Energética</i>
FM	Financial Management	<i>Administración Financiera</i>
GDP	Gross Domestic Product	<i>Producto Bruto Interno</i>
GEF	Global Environment Facility	<i>Centro Mundial para el Medio Ambiente</i>
GHE <sub>A</sub>	Expected Annual Hydropower Generation	<i>Generación Hidroeléctrica Anual Anticipada</i>
GHE <sub>Q</sub>	Expected Quarterly Hydropower Generation	<i>Generación Hidroeléctrica Trimestral Anticipada</i>
GHR	Real Hydropower Generation	<i>Generación Hidroeléctrica Real</i>
GHR <sub>A</sub>	Annual Real Hydropower Generation	<i>Generación Hidroeléctrica Anual Real</i>
GHR <sub>Q</sub>	Quarterly Real Hydropower Generation	<i>Generación Hidroeléctrica Trimestral Real</i>

GIA	Accounting and Management Information System	<i>Contabilidad y Sistema Administrativo de Información</i>
GNI	Gross National Investment	<i>Inversión Nacional Bruta</i>
GoU	Government of Uruguay	<i>Gobierno de Uruguay</i>
GWh	Gigawatt/Hour	<i>Gigavatios por hora</i>
IAD	Internal Audit Department	<i>Departamento de Auditoría Interna</i>
IBRD	International Bank for Reconstruction and Development	<i>Banco Internacional de Reconstrucción y Desarrollo</i>
IDA	International Development Association	<i>Asociación para el Desarrollo Internacional</i>
IFRS	International Financial Reporting Standards	<i>Normas Internacionales de Información Financiera</i>
IMF	International Monetary Fund	<i>Fondo Monetario Internacional</i>
INTOSAI	International Audit Standards Equivalent to Organization of Supreme Audit Institutions	<i>Normas Internacionales de Auditoría Equivalente a la Organización de las Entidades Fiscalizadoras Superiores</i>
IPF	Investment Project Financing	<i>Financiamiento de Proyectos de Inversión</i>
LIHQ	Lower Hydropower Limit	<i>Límite Energía Hidroeléctrica Baja</i>
MEF	Ministry of Economy and Finance	<i>Ministerio de Economía y Finanzas</i>
MIEM	Ministry of Industry, Energy and Mining	<i>Ministerio de Industria, Energía y Minería</i>
MWh	Megawatt/Hour	<i>Megavatio por hora</i>
PDO	Project Development Objectives	<i>Objetivos de Desarrollo del Proyecto</i>
PER	Public Expenditure Review	<i>Revisión del Gasto Público</i>
SDR	Special Drawing Rights	<i>Derechos Especiales de Giro</i>
SimSEE	Power Systems Simulation	<i>Simulador de Sistemas de Energía Eléctrica</i>
URSEA	Energy and Water Services Regulation Unit	<i>Unidad de Servicios de Regulación de Energía y Agua</i>
UTE	Electricity Transmission and Electric Power Plants National Administration	<i>Administración Nacional de Usinas y Trasmisiones Eléctricas</i>
VOCF	Targeted Level of Risk Coverage by the Fund	<i>Valor Objetivo de Cobertura del Fondo</i>

Regional Vice President: Country Director: Senior Global Practice Director: Practice Manager: Task Team Leaders:	Jorge Familiar Jesko S. Hentschel Marcelo Giugale Auguste Tano Kouame Cristina Savescu and Fernando Blanco
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URUGUAY  
DROUGHT EVENTS' IMPACT MITIGATING INVESTMENT PROJECT FINANCING

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## PAD DATA SHEET

Uruguay

Drought Events' Impact Mitigating Investment Project Financing (P149069)

## PROJECT APPRAISAL DOCUMENT

LATIN AMERICA AND CARIBBEAN

Macroeconomic and Fiscal Management Global Practice

Report No.: PAD1180

Basic Information			
Project ID P149069	EA Category C - Not Required	Team Leaders Fernando Blanco Cristina Savaescu	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [ ]		
Project Implementation Start Date 01-Jan-2015	Project Implementation End Date 31-Dec-2017		
Expected Effectiveness Date 01-Jan-2015	Expected Closing Date 31-Dec-2017		
Joint IFC No			
Practice Manager/Manager Auguste Tano Kouame	Senior Global Practice Director Marcelo Giugale	Country Director Jesko S. Hentschel	Regional Vice President Jorge Familiar
Borrower: National Development Corporation of the Oriental Republic of Uruguay			
Responsible Agency: Corporacion Nacional de Desarrollo (CND)			
Contact: Telephone No.:	Pedro Buonomo	Title: Email:	President
Project Financing Data(in USD Million)			
[ X ] Loan	[ ] IDA Grant	[ ] Guarantee	
[ ] Credit	[ ] Grant	[ ] Other	
Total Project Cost:	200.00	Total Bank Financing:	200.00
Financing Gap:	0.00		
Financing Source		Amount	

Borrower		0.00
International Bank for Reconstruction and Development		200.00
Total		200.00

#### Expected Disbursements (in USD Million)

Fiscal Year	2015	2016	2017
Annual	0.00	0.00	200.00
Cumulative	0.00	0.00	200.00

#### Institutional Data

##### Practice Area / Cross Cutting Solution Area

Macro Economics & Fiscal Management

##### Cross Cutting Areas

- [ X ] Climate Change
- [ ] Fragile, Conflict & Violence
- [ ] Gender
- [ ] Jobs
- [ ] Public Private Partnership

##### Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Public Administration, Law, and Justice	Public administration-Energy and mining	50		
Public Administration, Law, and Justice	General public administration sector	30		
Energy and mining	Hydropower	20	100	100
Total		100		

I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

##### Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Economic management	Other economic management	70
Public sector governance	Other public sector governance	30
Total		100

<b>Proposed Development Objective(s)</b>		
The Project Development Objective of the proposed operation is to enhance the Government of Uruguay's efforts to mitigate the effect of adverse weather conditions on its public sector accounts and to enhance the efficiency of its risk management framework used to mitigate these risks.		
<b>Components</b>		
<b>Component Name</b>		
Mitigation of the effects of adverse weather conditions		200.00
<b>Systematic Operations Risk- Rating Tool (SORT)</b>		
<b>Risk Category</b>		<b>Rating</b>
1. Political and Governance		Low
2. Macroeconomic		Moderate
3. Sector Strategies and Policies		Moderate
4. Technical Design of Project or Program		Low
5. Institutional Capacity for Implementation and Sustainability		Low
6. Fiduciary		Low
7. Environment and Social		Low
8. Stakeholders		Low
9. Other		
<b>OVERALL</b>		Moderate
<b>Compliance</b>		
<b>Policy</b>		
Does the project depart from the CAS in content or in other significant respects?	<input type="checkbox"/>	Yes [ ] No [ X ]
Does the project require any waivers of Bank policies?	<input checked="" type="checkbox"/>	Yes [ X ] No [ ]
Have these been approved by Bank management?	<input checked="" type="checkbox"/>	Yes [ X ] No [ ]
Is approval for any policy waiver sought from the Board?	<input checked="" type="checkbox"/>	Yes [ X ] No [ ]
Explanation:		
The contingent nature of the project and the low probability of disbursement (between 20 to 25 percent during the 3-years life of the project), justify a higher commitment charge than a regular IPF. Therefore, a waiver of Provisions and Modification of the Contractual Commitment Charge for IPFs under Operational Policy 3.10, Section <i>Pricing</i> , Paragraph 6 on Financial Terms and Conditions of IBRD Loans, IBRD Hedging Products, and IDA Credits is being sought for Board Approval.		
Does the project meet the Regional criteria for readiness for implementation?	<input checked="" type="checkbox"/>	Yes [ X ] No [ ]
<b>Safeguard Policies Triggered by the Project</b>		<b>Yes</b>
Environmental Assessment OP/BP 4.01		<b>X</b>

Natural Habitats OP/BP 4.04		X
Forests OP/BP 4.36		X
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12		X
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

#### **Legal Covenants**

Name	Recurrent	Due Date	Frequency
Operating Resources - Schedule 2 Section I. A Covenant 1	X		CONTINUOUS

#### **Description of Covenant**

The Borrower shall maintain CONAFIN AFI S.A. with the necessary resources to carry out the Project, and with a composition and terms of reference satisfactory to the Bank.

Name	Recurrent	Due Date	Frequency
Asset Management Contract with BCU - Schedule 2 Section I. A Covenant 2	X		CONTINUOUS

#### **Description of Covenant**

Not later than 30 days after the Effective Date the Borrower shall cause CONAFIN AFI S.A. to enter into an asset management contract with BCU to regulate the investment of the FEE's funds, all under terms and conditions satisfactory to the Bank.

Name	Recurrent	Due Date	Frequency
Annual Operating Budget - Schedule 2 Section I. A Covenant 3	X		Yearly

#### **Description of Covenant**

Not later than November 30 of each year during Project implementation, the Borrower shall cause CONAFIN AFI S.A. to: (i) submit to the MEF for its review and no objection an annual operating budget relating to expenses that CONAFIN AFI S.A. expects to be incurred in the following calendar year in relation to managing the FEE; and (ii) make said budget publicly available on CND's website.

Name	Recurrent	Due Date	Frequency
FEE Balance Reports - Schedule 2 Section I. A Covenant 4	X		Quarterly

#### **Description of Covenant**

During Project implementation, the Borrower shall cause CONAFIN AFI S.A. to prepare and provide to the Bank, on a quarterly basis, not later than 30 days after the end of the respective quarter: (i) a report on the balance of FEE's funds as of the end of the corresponding quarter (FEE Balance Report)

and make it publicly available on CND's website; and (ii) a report on the use of the FEE's funds a

Name	Recurrent	Due Date	Frequency
Report on the Targeted Value of Fund Coverage Schedule 2 Section I. A Covenant 5	X		Yearly

#### Description of Covenant

Not later than April 30 of each year during Project implementation, the Borrower shall cause CONAFIN AFI S.A. to submit to the Bank a report (prepared in accordance with the methodology set forth in Article 2 of Decree 442/011) assessing the Targeted Value of the Fund's Coverage for the purposes set forth in Article 3 of Decree 442/011.

Name	Recurrent	Due Date	Frequency
Minimum FEE Balance - Schedule 2 Section I. A Covenant 6	X		CONTINUOUS

#### Description of Covenant

The Borrower shall cause CONAFIN AFI S.A. to ensure that the FEE maintains at all times, throughout the implementation of the Project, a minimum balance equivalent to \$500,000 to cover the costs relating to the management of FEE's funds.

Conditions		
Source Of Fund	Name	Type
IBRD	Effectiveness condition	Effectiveness

#### Description of Condition

The Subsidiary Agreement has been executed on behalf of the CND and the CONAFIN AFI S.A in accordance with the terms and conditions referred to in Section I under clause B.1 of Section 1 of Schedule 2 of the Loan Agreement. The Subsidiary Agreement has been duly authorized or ratified by the Borrower (CND) and the CONAFIN AFI S.A. and is legally binding upon the CND and the CONAFIN AFISA.

Source Of Fund	Name	Type
IBRD	Disbursement condition (b) (i) - Schedule III Section B	Disbursement

#### Description of Condition

Unless and until the Borrower had provided the Bank with satisfactory evidence that the Real Quarterly Hydraulic Generation for a respective quarter is equal to or lower than 90% of the Expected Quarterly Hydraulic Generation, as evidenced by an Hydraulic Report issued by UTE for this quarter

Source Of Fund	Name	Type
IBRD	Disbursement condition (b) (ii) - Schedule III Section B	Disbursement

#### Description of Condition

Unless and until the Borrower had provided the Bank with satisfactory evidence that the condition (b)(i) has been caused by a drought event as confirmed by a resolution issued by UTE. Such resolution shall have been issued and submitted to the Bank within 12 months from the end of the quarter during which the condition under sub-paragraph (b)(i) above has occurred.

Source Of Fund	Name	Type
IBRD	Disbursement condition (b) (iii) - Schedule III Section B	Disbursement

#### Description of Condition

FEE's balance is less than the equivalent amount of fifty million Dollars (\$50,000,000), as evidenced by either: (A) a FEE Balance Report issued for the same quarter for which the Hydraulic Report under sub-paragraph (b)(i) has been issued; or (B) a statement issued by CONAFIN AFI S.A. and submitted to the Bank within 12 months from the end of the quarter during which the condition referred

#### Team Composition

##### Bank Staff

Name	Title	Specialization	Unit
Vipasha Bansal	E T Consultant	E T Consultant	LEGLE
Fernando Andres Blanco Cossio	Lead Economist	Lead Economist	GMFDR
Ruxandra Burdescu	Resident Representative	Resident Representative	LCCUY
Daniel Chalupowicz	Financial Management Specialist	Financial Management Specialist	GGODR
Antonio Cristian D'Amelj	Counsel	Counsel	LEGLE
Silvia G. Gulino Passera	Program Assistant	Program Assistant	GMFDR
Niels B. Holm-Nielsen	Lead Disaster Risk Management Specialist	Lead Disaster Risk Management Specialist	GSURR
Zafer Mustafaoglu	Program Leader	Program Leader	LCC7C
Victor Manuel Ordonez Conde	Senior Finance Officer	Senior Finance Officer	CTRLN
Juan Pradelli	Economist	Economist	GMFDR
Kirsten Burghardt Propst	Senior Counsel	Senior Counsel	LEGOP
Maryam Salim	Operations Adviser	Operations Adviser	OPSPQ
Julio Sanjines Gonzales	Procurement Specialist	Procurement Specialist	GGODR
Cristina Savescu	Economist	Team Lead	GMFDR
Lucia Spinelli	Senior Energy Specialist	Senior Energy Specialist	GEEDR
Sandra Monica Tambucho Perez	Senior Finance Officer	Senior Finance Officer	CTRLN
Jose Angel Villalobos	Senior Insurance Specialist	Senior Insurance Specialist	GFMDR

##### Non Bank Staff

Name	Title	City
Dario Bacchini	Actuary	Buenos Aires

Ana Maria Jul	Consultant				
Maria Pia Zanetti	Consultant				
<b>Locations</b>					
Country	First Administrative Division	Location	Planned	Actual	Comments



## I. STRATEGIC CONTEXT

### A. Country Context

1. **Uruguay is a small, high income country that has made marked progress in achieving macroeconomic stability, growth and shared prosperity.** Supported by favorable external environment, good governance and strong macroeconomic management, Uruguay's economic performance has been strong and the country achieved high income status in 2013.<sup>1</sup> It has made remarkable progress in fighting poverty and boosting shared prosperity, with the per capita income of the bottom 40 percent of the income distribution growing at an annual rate of 4.9 percent growth during 2006-2012 well above the 2.4 percent increase in total per capita income.
2. **Uruguay is highly exposed to weather related shocks.** The importance of agriculture for the economy and strong reliance on hydropower of its energy matrix makes the economy vulnerable to weather variations. In particular, droughts have a strong direct negative impact on GDP growth, electricity production, and fiscal and trade balances. Although hydropower is a cheap and clean energy source, energy production and costs are negatively impacted in drought years. In such times, electricity costs increase significantly due to the need to switch to more expensive energy sources (mainly thermal, which relies mostly on oil imports, or electricity imports). Higher electricity generation costs affect GDP growth performance and impact the financial balances of the state-owned electricity company, the Electricity Transmission and Electric Power Plants National Administration (*Administración Nacional de Usinas y Trasmisiones Eléctricas, UTE*) and the consolidated public sector. Higher oil imports needed to generate thermal energy also deteriorate Uruguay's trade balance.
3. **Droughts have sizeable negative impact on Uruguay's fiscal position.** Increased electricity generation and/or electricity import costs affect the balances of UTE. Due to the importance of UTE in the consolidated public sector, fiscal deficits are negatively affected in drought years (see Figure 1: Energy Generation Costs, UTE's and Fiscal Balances, 2003-13). In 2012, for example, the fiscal deficit increased to 2.8 percent of GDP up from 0.9 in 2011, partly on account of a drought-related deterioration in the financial balance of UTE.<sup>2</sup>
4. **The Government of Uruguay (GoU) has developed a comprehensive risk management strategy to mitigate the negative effects of droughts.** This strategy combines structural policies to reduce weather related risks through the diversification of the energy matrix, which is expected to make it more resilient to weather and oil price shocks, and a financial risk management strategy which attenuates the effects of droughts on UTE and on the public sector finances. As risk retention (self-insurance) instruments, UTE and GoU have built reserve funds for the purpose of offsetting unexpected additional costs generated by weather shocks of moderate-to-high frequency and low-to-moderate impact. In particular, the GoU established the Energy Stabilization Fund (FEE) which builds buffers in periods of favorable weather conditions and finances additional electricity costs in drought periods, playing a fiscal stabilization role. In

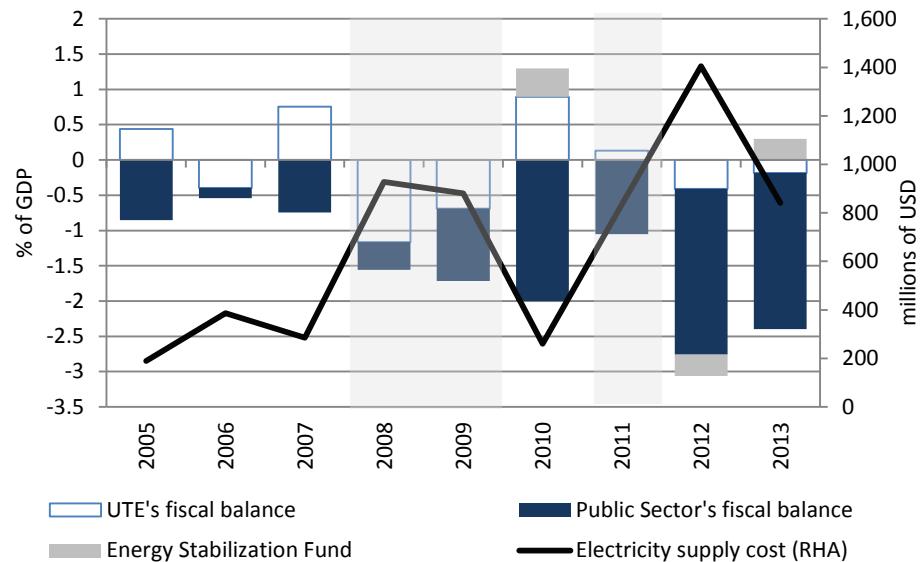
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<sup>1</sup> As of 1 July 2014, high-income economies are defined as those with a GNI per capita (Atlas method) of \$12,746 or more. Uruguay achieved a GNI per capita of US\$15,180 in 2013, having the second highest income per capita in Latin America and the Caribbean, after Chile.

<sup>2</sup> For more details on the fiscal impacts of droughts, see the Uruguay: Mitigating Fiscal Risks - Public Expenditure Review (2013).

addition, the GoU has contracted a weather and oil price insurance to transfer risks of low probability but high impact events.

**Figure 1: Energy Generation Costs, UTE's and Fiscal Balances, 2003-13**



Source: Ministry of Economy and Finance (MEF) / Shaded areas indicate drought years

**5. The proposed operation supports GoU's risk mitigation strategy.** Efficient risk mitigation strategies imply appropriate levels of risk coverage through an integrated approach. In particular, this operation covers an intermediate layer of risks which correspond to events of moderate probability and moderate costs impact that currently are not covered by the instruments mentioned above.

**6. The proposed operation has substantial value added.** First, it represents an innovative approach to using Investment Project Financing. Using this instrument in a fully contingent basis is expected to be an attractive option to many countries that have hydro dominated energy systems. Second, the proposed operation fills a risk coverage gap and enables a better integration and optimization of the GoU's risk management strategy. Third, the operation offers the possibility to contribute to the enhancement of the institutional framework of the FEE and reinforces the transparency of its operations. Last but not least, the operation would provide additional protection in a critical transitional period. Uruguay's energy sector is evolving towards a more diversified and efficient electricity matrix through a number of projects developing alternative energy sources. While the implementation of these projects is on track and is expected to be completed by the end of 2016, implementation delays are plausible<sup>3</sup>. Therefore, droughts will still have strong and negative impacts and the enhancement of risk mitigation instruments will provide safety if potential delays materialize.

<sup>3</sup> For example, plans to increase wind generated electricity capacity are very ambitious as the GoU's aims at increasing the share of wind energy from 2 percent to 30 percent by 2016. Even if timely implemented, integrating such a high level of wind-power penetration into the country's electric grid is challenging. This level of wind power absorption has only been achieved on a consistent level in Denmark which has decades of experiencing wind power management (30 percent average in 2013).

## B. Sectoral and Institutional Context

7. **Uruguay has substantial hydropower to meet a large portion of its energy needs at low costs, although the hydro-based electricity production is volatile.** Over the last 8 years, hydropower represented between 43 to 81 percent of the electricity mix, varying with the weather conditions. Supply has historically been complemented by thermal electricity and electricity imports to meet demand. Non-conventional renewable sources (biomass and wind) are also increasing their participation. The country has reached its hydroelectric potential which today represents close to 75 percent of the electricity mix. However, the hydrology of the river basins that connect to the hydroelectric system is highly variable and impacts directly the cost of producing electricity. At the same time, Uruguay has at this point no proven reserves of oil, natural gas, or coal.

8. **The cost of electricity production varies significantly with rainfall.** It increases on average by approximately 75US\$/MWh between a rainy and dry year due to the shift to substantially more expensive sources such as thermal energy and electricity imports.

9. **To avert transferring the high volatility of electricity generation costs to electricity tariffs that negatively affect households and firms, the GoU has adopted stabilization mechanisms.** Electricity tariffs are defined taking into account medium-term electricity generation costs. Tariff readjustments take into account the evolution of costs in relation with expected inflation, the price of Brent, the expected exchange rate vis-à-vis the USD, and UTE operating costs.<sup>4</sup> Before the establishment of the FEE, deviations from average cost were mainly absorbed through lower UTE profits or transfers from the Ministry of Economy and Finance (MEF) to UTE. Consequently, additional costs were reflected in UTE's financial balances and in the consolidated public sector.

10. **On the structural front, public and private investments in the energy sector are expected to increase the contribution of other renewable sources, improving efficiency, and moving to cheaper alternative sources.** By 2017, authorities expect a more balanced electricity matrix, reflected in a lower proportion in hydropower, less expensive, more efficient thermal generation plants, and non-conventional renewable sources (wind and biomass). Cost differences between rainy and dry years is expected to drop from 75US\$ per MW/h in 2011 to an estimated 25US\$ per MW/h (see Annex 6). However, some implementation challenges—such as attaining the planned integration rate of intermittent sources of energy in the transmission grid or slow investment executions—could delay the transition toward the new energy matrix.

11. **Meanwhile, as the electricity matrix is being diversified, the GoU has put in place a financial risk mitigation strategy including risk retention and risk transfer instruments to mitigate the effects of drought on electricity generation costs.** As part of its risk retention mechanisms, UTE maintains around US\$80 million in cash to face weather shocks that have short duration, are frequent but of limited impacts (see Figure 2). The FEE is a central part of this strategy. Favorable weather conditions in 2013-14 facilitated the building up of a sizeable amount of funds at the FEE (around US\$310 mi). Finally, following the combination of severe drought and high oil prices that resulted in a substantial increase in electricity generation costs in

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<sup>4</sup> Tariffs are proposed by UTE, the Energy and Water Services Regulation Unit (*Unidad Reguladora de Servicios de Energia y Agua - URSEA*) analyses the proposal and transmits its assessment to the executive branch that determines the tariffs

2012, as part of its risk transfer strategy, UTE purchased a weather-oil price insurance that protects its financial position in the case of low probability but of extreme and high cost droughts (see Box 1 for more details).<sup>5</sup> In this manner, the FEE also contributes to stabilize electricity tariffs in the face of climatic events, enabling a more predictable tariff environment for households and firms without affecting the long term fiscal position.

#### **Box 1. Weather and Oil Price Insurance Transaction Intermediated by World Bank Treasury**

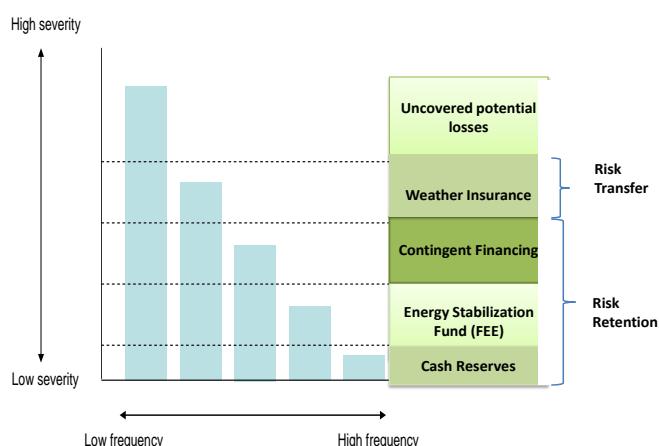
*Financing Objective:* The Treasury has intermediated a Weather and Oil Price Insurance to help protect UTE against higher cost energy production associated to droughts. This operation provides cost certainty to the electricity company, protects consumers from the risk of high and volatile electricity costs, and provides public budget stability.

*Value Added:* The involvement of the World Bank has been crucial to strengthen market confidence in the transaction, crowd-in market participants and provide technical support to UTE with respect to the level of coverage needed and how to deploy market solutions with other financial approaches such as a stabilization fund and contingent loans

*Risk coverage:* The Treasury intermediate insurance was the largest transaction in the weather risk management market and has provided a customized solution for UTE providing coverage for three semesters from January 1<sup>st</sup> 2014 to June 30<sup>th</sup> 2015, for a cumulative level of USD450 million. The size of the payout depends on the severity of drought and oil price levels.

*Source:* World Bank's Treasury website.

**Figure 2: Layered Financial Risk Management Strategy of UTE**



*Source:* Bank Task team and UTE

12. The FEE was established in 2010 as a sole-purpose fund “to reduce the negative impact of hydropower deficits on the financial situation of UTE and on the consolidated public sector accounts”. Decree 442 of December 2011 and Decree 305 of October 2014, define the roles of each stakeholder, clear rules for contributions and uses, and conservative and transparent investment policies. These rules and policies make the FEE a sound stabilization instrument, tailored for the mitigation of risks faced by UTE (see Box 2).

<sup>5</sup> The weather-oil insurance covers the period January 2014 to June 2015

**13. Still there is room for further improvements to the FEE's institutional framework, its integration with the overall fiscal framework, and with risk management strategy.** According to the Decree 442/011 and its amendment through Decree 305/014, an administrative trust fund agreement is expected to define institutional arrangements governing the FEE and the roles and responsibilities of the stakeholders. In this regard, with Bank's support, the GoU is following international best practices in setting up this administrative trust agreement.

**Box 2. The Energy Stabilization Fund: Rules of contributions, uses, and maximum level.**

The FEE has well defined and transparent rules of contributions and use of funds, and a ceiling for the accumulated funds that ensures its stabilization role. It is tailored to the specific characteristics of the relation between weather conditions and UTE's balances.

Decree 442 of 2011 and its amendment Decree 305/014, approved in October 2014, establish clearly, using objective criteria based on hydrological conditions, the situations in which UTE needs to allocate funds to FEE and the situations in which UTE can access the FEE funds. The two decrees also establish: a) a minimum level of annual contributions in order to reduce the probability that the FEE's funds are exhausted; b) a ceiling for the accumulated funds, to avoid excessive accumulation of funds. In 2011, the ceiling was set at 4 billion *indexed units* (the value in pesos of an indexed unit is published by the National Institute of Statistics), the equivalent of US\$480 million. Once the FEE accumulated funds reach this ceiling, UTE does not have to make additional contributions. The amendment to Decree 442/011 approved in October 2014, introduces the Targeted Level of Coverage by the Fund (Valor Objetivo de Cobertura del Fondo, VOCF) which is a dynamically optimized ceiling that corresponds to a targeted risk coverage level of the FEE. In particular, the VOCF is the level of the FEE funds necessary to cover additional costs of electricity generation in excess of the average generation costs in 85 percent of the simulations. The VOCF is set taking into consideration the structure of the energy matrix and the costs of alternative sources of energy. The VOCF is used to calculate the annual contributions from UTE. Finally, the size of the FEE is bounded between 0 and the VOCF, which means that when funds are completely exhausted, the FEE no longer can fulfill its function, while the ceiling level is indicative of the GoU's targeted risk level coverage of this risk retention instrument. Finally, Decree 442/011 and its amendment through Decree 305/014 mandates that the FEE's assets are managed by the Central Bank in an account separate from the country's international reserves, but following similar investment guidelines.

*Source: World Bank staff.*

### C. Higher Level Objectives to which the Project Contributes

**14. The proposed project supports the GoU's objective to smooth the impact of hydropower volatility and associated electricity generation costs on public sector accounts during a period in which the energy matrix is evolving.** The proposed operation will enhance the role played by the FEE as follows. First, by providing contingent financing to the FEE in case the funds available in the FEE fall below a minimum level or for additional risk coverage (above the 85-percent-threshold reflected in the Targeted Level of Fund Coverage (VOCF), the operation reduces the opportunity costs (fiscal and financial) of the GoU's drought-related risk mitigation policies. Second, it will support Uruguay's institutions in implementing a risk mitigation framework necessary in a period in which the energy matrix becomes more resilient to the weather cycle.

**15. Moreover, this operation aims at improving the efficiency of risk mitigation by further integrating risk mitigation tools, achieving an appropriate balance between risk retention and risk transferring.** The proposed project supports a sophisticated risk management strategy, which is expected to further protect GoU's fiscal position from weather related shocks. The Bank has been promoting a three-layer approach for financing risk: the high

frequency and low severity losses should be retained as any risk transfer strategy is very expensive; the second layer can be partially retained and mitigated using contingent loan instruments, which are less expensive than traditional risk transfer ones, and finally, the third layer -related to low probability but carrying catastrophe losses- should be fully transferred. This approach is the one pursued by UTE and the GoU: the cash obtained by normal operations and FEE provides resources for first-layer losses, the proposed contingent loan will serve the middle layer of possible losses while the current weather-oil price insurance covers the top layer of losses.

**16. Consistent with the World Bank Country Partnership Strategy for the period 2010-15<sup>6</sup>, the proposed operation is expected to contribute positively to the World Bank Group (WBG) two strategic goals of reducing poverty and boosting shared prosperity.** The CPS is focused on four pillars: (i) Reducing Macroeconomic Vulnerability & Strengthening Public Sector Administration; (ii) Competitiveness & Infrastructure; (iii) Agriculture, Climate Change, and Environment; and (iv) Increasing Social Inclusion & Equity. Comprised in the first pillar, this operation supports GoU's risk mitigating strategy and complements two ongoing DPL-DDOs operations that have been providing precautionary financing to the GoU in the context of a still uncertain global economic scenario. Consistent with this approach, this operation provides contingent financing at a time when the energy matrix is still vulnerable. As this operation enhances the functioning of the FEE, it helps to obviate electricity tariff increases or government expenditure cuts that might affect the poor. In particular, tariff stability benefits disproportionately the poor as they allocate a larger share of their budgets to electricity. Moreover, as this operation supports tariff stability which in turn favors more efficient consumption and long term investment decisions, it contributes to better growth prospects.

## II. PROJECT DEVELOPMENT OBJECTIVES

### A. PDO

**17. The Project Development Objective of the proposed operation is to enhance the GoU's efforts to mitigate the effect of adverse weather conditions on its public sector accounts and to enhance the efficiency of its risk management framework used to mitigate these risks.**

**18. This innovative IPF-Contingent Financing fills a gap in the GoU's risk management strategy and is expected to generate fiscal savings as it offers a more cost effective risk mitigation tool.** There are no contingent financing instruments for weather effects of moderate impact and probability in private credit markets. Alternative options are pre-financing, standard credit operations or weather insurance, all of them imperfect substitutes to contingent financing and substantially more costly. In this regard, this IPF-Contingent Financing is instrumental to the GoU's objective to cover intermediate layers of risks in a cost effective manner.

**19. The operation also contributes to improving the governance of the FEE.** The Decree 422/011 that regulates the operating rules of the FEE instructed the establishment of a trust to manage the funds accumulated in the FEE. During the preparation of this operation, the Bank assisted authorities in the design of the administrative trust fund agreement following international best practices of institutional frameworks for stabilization funds. These practices

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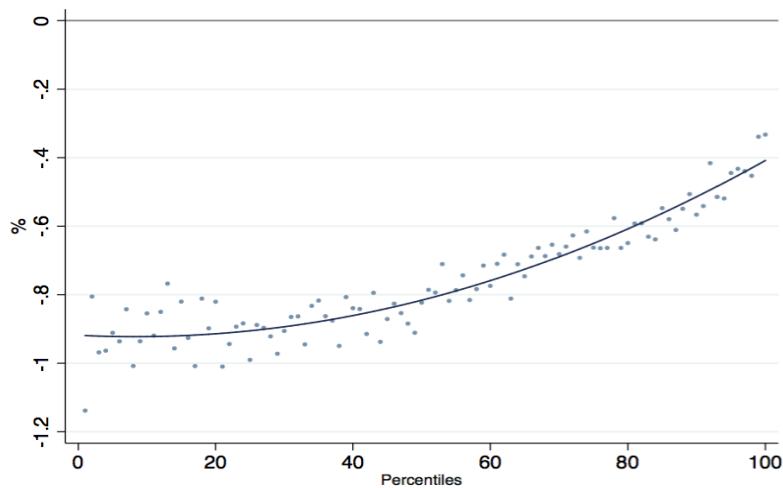
<sup>6</sup> Report No. 55863-UY, discussed by the Executive Directors on October 14, 2010.

include clear definition of roles and responsibilities of management, transparent transactions, investments and use of resources, regular reporting and the presentation of operating budgets. Thus the operation supports the institutional enhancement of the FEE ensuring adherence to these principles.

## B. Project Beneficiaries

20. The beneficiaries of the proposed operation can be grouped at two levels: direct beneficiaries are the GoU and UTE whose financial positions will be protected by the leverage provided by this contingent financing which will enhance FEE's ability to fulfill its stabilization role; indirect beneficiaries are households and firms who would take consumption and investment decisions in a more predictable electricity tariff environment. Figure 3 shows the first round impact (incidence) effect of a hypothetical 20 percent increase in electricity tariffs on real per capita incomes by deciles, which is regressive as it reduces the income of the poorest 20 percent by 9 percent, and by 5 percent the income of the richest 20 percent of the population.<sup>7</sup>

**Figure 3: The estimated effect of a 20 percent increase in electricity tariffs on real per capita incomes by percentiles**



Source: Bank's own calculations based on 2000 National Household Survey of Expenditure and Income

## C. PDO Level Results Indicators

21. Progress towards the achievement of the PDOs will be measured by the following indicators (see Annex 1 for quantified benchmarks):

**Indicator 1:** Additional financing needs from the central Government to cover Additional Cost of Electricity Generation in drought events of moderate probability-moderate impact (Additional Costs of Electricity Generation in drought events minus FEE's available funds (including the contingent financing).

**Indicator 2:** Share of the Additional Cost of Electricity Generation in drought events of moderate probability-moderate impact that is covered by the FEE's Targeted Level of Coverage by the Fund (VOCF).

<sup>7</sup> The analysis assumes that in the short run there are no substitution effects, as households are unable to adapt their consumption behavior and preferences and that the price increase directly impacts their budget.

**22. The first indicator measures the GoU Financial Risk Management Strategy's ability to mitigate the effect of weather shocks on public finances.** The complete package of instruments (including the contingent financing) are expected to cover additional costs of electricity generation as much as possible in case of a droughts depending on the severity of such droughts. Therefore, the lower this indicator is (low additional financing) the stronger FEE's ability to shield public accounts from weather conditions

**23. The second indicator measures the efficiency or accuracy of the FEE's Targeted Level of Coverage by the Fund (VOCF) in covering the risks for which it was created.** This indicator will help to monitor if the Vpcf provides an adequate level of risk coverage given the evolution of the risk profile. As the energy matrix evolves, the necessary resources to cover the same level of risks are expected to be adjusted periodically. The annual recalibration of the Vpcf is expected to enhance the efficiency of the FEE as it will prevent the excessive accumulation of resources while ensuring an adequate level of risk coverage. Therefore, the success of the project will be reflected in keeping the risk coverage at the targeted level.

**24. The proposed operation also aims to improve the governance and transparency of the FEE.** In line with best practices of stabilization funds the proposed project will ensure in addition to transparent rules of contribution and use and good integration with the country's overall fiscal framework, clear and publicly accessible investment policies, accountable and professional management, operating budgets, thus supporting the institutional enhancement of the FEE with the indicator reflecting the progress on the institutional soundness of the FEE.<sup>8</sup>

### **III. PROJECT DESCRIPTION**

**25. The proposed operation will provide contingent financing through CONAFIN AFISA as trustee of the FEE to capitalize the FEE so as to enable the FEE to provide additional resources needed by UTE to face unexpected costs of electricity generation in adverse weather conditions.** The National Development Corporation (CND), an autonomous entity that is not part of the consolidated non-financial public sector, will make the proceeds of the Loan available through a subsidiary agreement to CONAFIN AFISA (as trustee of the FEE) for further transfers to UTE, which when realized will be accounted for in UTE's budget management system for regular spending. The loan will have a sovereign guarantee from the Oriental Republic of Uruguay. The contingent financing will be triggered by:

- i. According to the rules of use of the FEE funds set in the Decree 422/011 and its amendment through Decree 305/014. This ensures that funds are transferred to UTE only when the expected hydropower generation is lower than 90 percent of the expected hydropower generation as a result of adverse weather conditions; and
- ii. Once the FEE's own funds fall to or below a minimum level set at US\$50 million. This will ensure that UTE will use first resources accumulated in the FEE to finance the increased electricity generation costs associated to the adverse weather conditions.

**26. The project also contributes to further strengthening of the governance and efficiency of the FEE, as it requires that during implementation:**

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<sup>8</sup> Annex 5 on the FEE provides information on best practices for stabilization funds.

- The trustee CONAFIN AFISA (i) submits to the MEF for its review and no objection an annual operating budget relating to the operating expenses that CONAFIN AFISA expects to be incurred in the following calendar year in managing the FEE; and (ii) makes the operating budget publicly available on CND's website.
- CONAFIN AFISA prepares and provides to the World Bank, on a quarterly basis: i) a report on the balance of the FEE's funds as of the end of the corresponding quarter (FEE Balance Report) and make it publicly available on CND's website; and ii) a report on the use of the FEE's funds and the investments of the FEE's funds (including returns and losses from investments) for the same quarter of the FEE Balance Report.
- CONAFIN AFISA prepares (in accordance with the methodology set forth in Article 2 of Decree 442/011) and submits to the Bank, a report assessing the Targeted Level of the Fund's Coverage (VOCF) for the purposes set forth in Article 3 of Decree 442/011.
- CONAFIN AFISA ensures that the FEE maintains at all times, throughout the implementation of the Project, a minimum balance equivalent to \$500,000 to cover the costs relating to the management of FEE's funds.

#### A. Project Components

**27. The operation has one component: Mitigation of the effects of adverse weather conditions by enhancing FEE's ability to cushion the impact on public sector accounts.** This consists of provision of contingent financing to CND that will on-lend the proceeds to the FEE through the trustee CONAFIN AFISA to capitalize the FEE to mitigate the effects of adverse weather conditions when disbursement conditions have been met. This project will contribute to reducing the probability of Government having to transfer resources to UTE and the amount of these additional transfers needed by UTE to face drought related unexpected costs of electricity generation.

#### B. Project Costs and Financing

Project Components	Project cost (millions US\$)	IBRD Financing (US\$ millions)	% Financing
1. Leveraging the FEE resources	200	200	100
Total Project Costs	200	200	100

#### C. Lessons Learned and Reflected in the Project Design

**28. As this innovative IPF operation has a one-hundred-percent contingent component, it is similar with other Bank instruments that provide contingent financing, and thus lessons have been drawn from these operations to inform the project design.** Firstly, the operational structure needs to be sufficiently flexible and simple to provide timely support, which is instrumental to the client risk management strategy. Secondly, contingent financing is a cost effective tool for risk mitigation. Indeed, the two existing Uruguay DDOs enhance the risk management strategy, providing contingent financing to the Government in the event of adverse global economic shocks. Thirdly, disaster risks should be proactively managed rather than treated as an exogenous shock to development. In this regard, this operation contributes to a proactive risk management strategy, providing rapid and flexible financing. Ex-ante risk financing

instruments helps limiting the interruption of ongoing investments in the event of disruptive events.

**29. World Bank technical documents show that contingent financing is the most adequate option to mitigate medium probability moderate impact events, which is consistent with the World Bank's approach to risk mitigation.** In the publication “Building Resilience—Integrating Climate and Disaster Risk into Development”<sup>9</sup> the World Bank proposes a series of instruments to support financial protection, which are tailored for national and often regional needs and varying disaster risk profiles. It recommends that for low-severity, high-frequency events, risk retention, in the form of budget reserves and contingent credit should be used as it is the most appropriate solution. In particular for Uruguay the Public Expenditure Review (2013), recommended the use of contingent financing to deal with the impact of weather-related events on public sector accounts.

**30. Large-scale and decentralized renewable energy operations face particular implementation challenges.** These are associated with market dispersion, the large number of stakeholders involved, and the integration of intermittent sources of energy in the transmission grid. As a result, delays in the implementation and full operation of these projects are likely, thus, the proposed operation will provide further protection to public finances during this transformational phase of the energy matrix.

#### **IV. IMPLEMENTATION**

##### **A. Institutional and Implementation Arrangements**

**31. The proposed operation will be implemented over a three-year period, and the overall coordination and implementation will be the responsibility of the National Development Corporation (CND), CONAFIN AFISA, and the Ministry of Economy and Finance.** The proposed operation will rely on implementation arrangements between CND and its 100 percent controlled company CONAFIN AFISA (Figure 4).

**32. Given that the FEE is not an independent legal entity, an Administrative Trust Fund will be established, with CND acting as the Trustor, CONAFIN AFISA as the Trustee, and UTE as the beneficiary.** The CND will make the proceeds of the Loan available to CONAFIN AFISA, acting as trustee of the FEE pursuant to the provisions of the Administrative Trust Agreement, under the subsidiary agreement between CND and CONAFIN AFISA, for further transfers to UTE, which when realized will be accounted for in UTE’s budget management system for regular spending. The conditions will include inter alia: (a) the provisions of the Administrative Trust Agreement; (b) the provisions of Article V of the General Conditions; (c) the obligations of CONAFIN AFISA set forth in the provisions of Schedule 2 of the Loan Agreement; and (d) the obligation of CONAFIN AFISA to carry out the Project in accordance with the World Bank’s Anti-Corruption Guidelines.

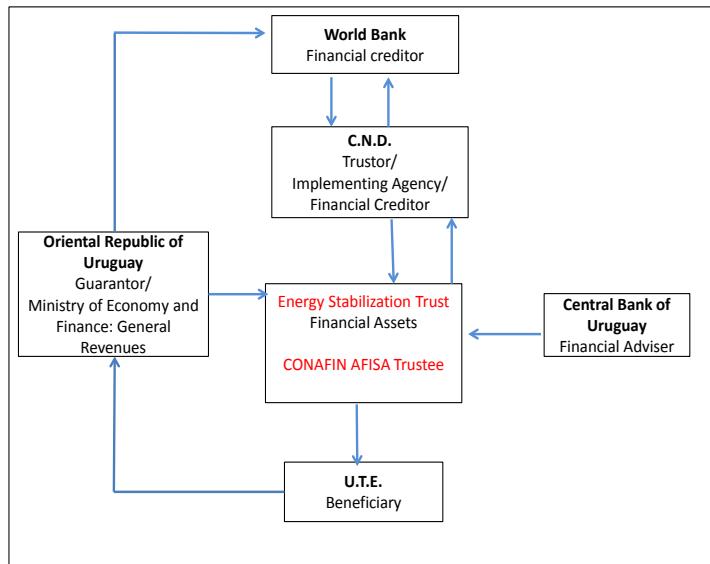
**33. The CND will ensure that CONAFIN AFISA has the necessary resources to carry out the Project.** CONAFIN AFISA will enter into an asset management contract with BCU to define the investment of the FEE’s funds and will ensure that the FEE maintains, throughout the

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<sup>9</sup> [http://www.gfdrr.org/sites/gfdrr/files/publication/WBG\\_2013\\_Building\\_Resilience\\_Full\\_Report-English.pdf](http://www.gfdrr.org/sites/gfdrr/files/publication/WBG_2013_Building_Resilience_Full_Report-English.pdf)

implementation of the Project, a minimum balance equivalent to \$500,000 to cover for the costs relating to the management of FEE's funds.

**Figure 4: Institutional arrangements**



34. **The CND will be responsible for fiduciary, management, and monitoring and evaluation tasks.** The CND will be responsible for monitoring the conditions for disbursements and of requesting the disbursement of the contingent financing if the disbursement conditions are met and will be responsible for disbursing to the Energy Stabilization Fund, as part of the on-lending operation. The Trustor will monitor compliance with the rules of disbursement and will be responsible for certifying that the conditions are met and for informing the World Bank once the conditions for disbursement have been met. The Trust Fund will be funded with internal government resources provided by *Rentas Generales*, funds contributed by UTE, and external financing.

35. **Upon the Bank's request the Borrower will provide an audit of the deposit account and a written confirmation that the amount of the disbursement has been credited to the account of the Energy Stabilization Fund managed by the Trustee CONAFIN AFISA.**

## B. Results Monitoring and Evaluation

36. **Given the strong technical content of the operation, several quantitative indicators have been identified.** The project will be closely monitored by the technical staff of the MEF and UTE and the Bank's task team. The contingent nature of the operation enables a permanent follow-up of disbursement conditions that eventually trigger the operation. Financial reporting will be produced on a monthly basis and an annual assessment of the main parameters of the FEE will facilitate monitoring activities.

## C. Sustainability

37. **The project is sustainable for a number of reasons.** The legal framework of the FEE ensures its continuous operation and adherence to the rules of accumulation and use. The administrative trust agreement will further strengthen the governance and transparency of the

FEE. The regular updating of the key parameters of the FEE accumulation and withdrawal rules fostered by the intense policy discussions during the preparation of the project ensures its financial sustainability. The team undertook an Economic and Financial analysis that shows that the FEE is financially sustainable which means that the rules of accumulation ensure the targeted risk coverage. In the medium run, the high quality design of the FEE and the expected reduction of electricity generation costs associated to the improved energy matrix ensure the achievement of a steady state level for the resources accumulated by the FEE.

## V. KEY RISKS

### Overall Risk Rating and Explanation of Key Risks

**38. The overall risk to the development results associated with this proposed operation is moderate.** The most relevant risks relate to macroeconomic developments and sector strategies and policies:

(i) **Macroeconomic.** Uruguay is highly integrated and exposed to the regional and global economy, and the country is vulnerable to drought shocks. Government's macroeconomic policies enabled the country to build resilience against these shocks, but remaining risks are still considerable. In particular, risks affecting the electricity generation costs not related to drought, such as increases in oil prices can affect UTE finances and may limit its ability to contribute to the FEE. However, the clear rules of use and contributions to the FEE that guarantees positive flows being allocated to it in good weather conditions and the contingent financing provided by this proposed operation are expected to ensure the necessary funding for the FEE's to exert its stabilization role. In summary, risks stemming from the Government's macroeconomic policy or macroeconomic shocks are considered moderate.

(ii) **Sector strategies and policies.** The sectors that contribute most decisively to the achievement of the PDOs of this operation are Fiscal Management and the Energy sector. In both cases, strategies and policies are sound in terms of their technical dimensions, are quite stable and predictable, and are fully aligned with Uruguay's development strategy. The governance framework in the two sectors is well defined and the coordination between Finance and Energy is strong. Nevertheless, there are risks associated with the implementation of the Energy Sector strategy. In particular the shift to a more diversified energy matrix that could affect the PDOs of this project. In particular, delays in the completion of investment projects could translate in higher impacts of weather related shocks on GoU's fiscal position. In summary risks associated to sector policies are deemed as moderate.

## VI. APPRAISAL SUMMARY

### A. Economic and Financial Analysis

**39. The main contribution of the proposed operation is that it complements the set of risk management tools that the GoU has put in place in the last years to mitigate the impact of weather-related shocks on public finances.** This operation fills a risk coverage gap and enables a better integration and optimization of its strategy. Moreover, the operation enhances the institutional framework of the FEE and reinforces its transparency.

**40. To measure the value added of this project to the GoU's risk management strategies, two simulations (with and without the contingent financing project) are compared for two different scenarios.** The first simulation (Figure 5) looks at the expected additional financing that the Government will need to finance the cost of supplying the demand with and without the project, assuming that GoU's investment plans to diversify the matrix will be completed as contracted without delays (optimistic scenario). The second simulation (Figure 6) incorporates a scenario in which there are delays in UTE's plan to diversify the electricity matrix (realistic scenario). As the following three years are critical for the transition of the energy matrix, it is important to note that losses under the second scenario are substantially higher than in the scenario of timely completion of the transition to the new electricity matrix. This second scenario seems to be the more relevant one to assess the contribution of the project<sup>10</sup>. Montecarlo simulations have been performed to estimate the conditional expected losses in the 5 percent tail of the distribution.

**41. Results of the exercise show a substantial value added of the operation.** The value added of the projection is represented by the difference between conditional expected tail loses (CETL) with the project (including cash, FEE, insurance and contingent loan) and the CETL without the project (including cash, FEE and insurance). The contribution of the proposed operation is non negligible even in the more optimistic scenario where all installed wind capacity is in place as planned by UTE. The project contribution is much higher in the realistic scenario in which some of the investments will suffer delays. While the implementation of these projects is on track and should be completed by the end of 2016, implementation delays are probable. As a result, droughts are still expected to have strong and negative impacts, and therefore the value added of the proposed operation in this critical transition period is even higher. As expected, the decrease in risk occurs only in the first few years, as the contingent credit line is for three years, and after that period the pattern of risk is similar in both scenarios because the matrices under the two scenarios tend to converge beyond 2017.

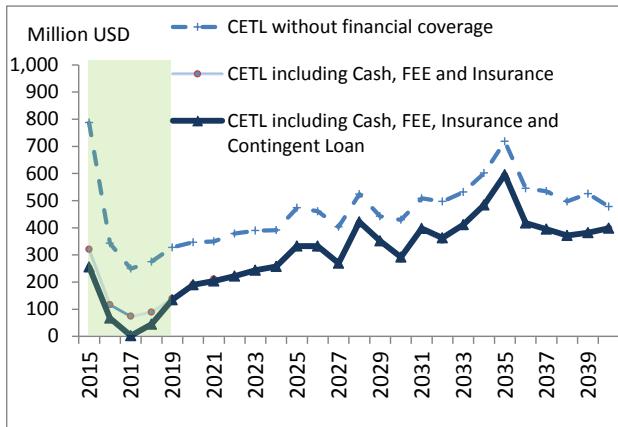
**42. The value added of this operation is expected to increase further when the climate change impact is taken into account.** A recent study by ECLAC (2010) highlights that the main consequences of climate changes in Uruguay will be a greater frequency and intensity of extreme events, resulting in longer periods of droughts and floods. Moreover, the Uruguay PER (2013) points to a significant increase in rainfall volatility in the last decade.

**43. Beyond the contribution described above, this operation is already contributing to the enhancement of the institutional framework of the FEE and the overall risk management strategy of authorities.** The project preparation has expedited the setting-up of the trust fund that will manage the FEE. Policy dialogue between authorities and the task team enabled the fine tuning of the trust fund and the inclusion of clauses to ensure that it will be transparent, consistent with best practices, and adapted to their circumstances. The knowledge interchange between UTE's and Bank staff enabled the enhancement of the overall financial risk management strategy through the full integration of its component, the periodic assessment of parameters of the FEE and the optimization of the risk management strategy.

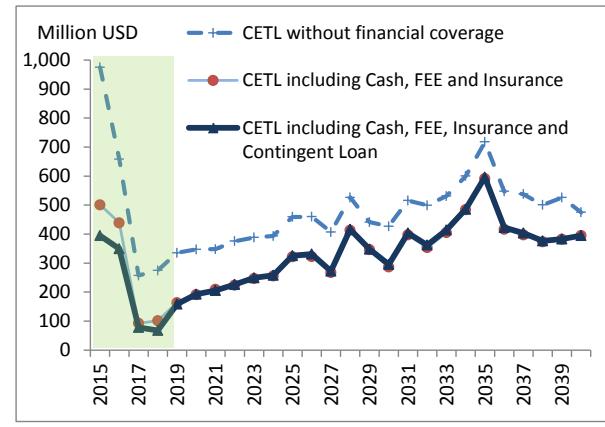
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<sup>10</sup> See footnote 3.

**Figure 5: Conditional expected tail loss, wind capacity as planned**



**Figure 6: Conditional expected tail loss, delays in wind capacity installation**



Source: World Bank staff calculations using UTE SimSEE model. The shaded area indicates the lifetime of the proposed project. // Note: The results of the financial risk analysis are preliminary, based on 1,000 simulations.

## B. Technical analysis

44. **The technical design of the proposed contingent financing is instrumental to the simultaneous achievement of fiscal stabilization and weather-related risk management.** By adopting the same rules of accumulation and use of the FEE and covering risks beyond the risks already covered by the FEE, it strengthens the stabilization role of the FEE. In addition, risk management needs to be cost effective. The contingent nature of this operation gives it important advantages compared with other risk mitigation options. The low cost of contingent financing suggest that it is the most adequate instrument to address second layer risks.

## C. Financial Management

45. **A Financial Management (FM) Assessment of the arrangements for the proposed Project was carried out in accordance with OP/BP 10.00 and in line with Bank specific guidelines found that the FM arrangements for the proposed operation meet Bank requirements and are acceptable to the Bank.** (See Annex 3 for more details).

46. **The CND and CONAFIN AFISA need to maintain financial management systems in accordance with the provisions of Section 5.09 of World Bank's General Conditions.** CONAFIN AFISA needs to prepare and furnish to the Bank interim unaudited financial reports of the FEE for the Project. In addition, CONAFIN AFISA needs to have the consolidated Financial Statements audited. As per the provisions of the Administrative Trust Agreement the Financial Statements of the FEE will be audited each fiscal year and will be presented to the World Bank as part of the Project implementation.

47. **Disclosure of Audited Financial Statements.** CND will disclose the Project audited financial statements following its own standard procedures for disclosure of financial statements of multilateral financed projects. Following the formal receipt of the audited financial statements, the Bank will also make them available to the public in accordance with the World Bank Policy on Access to Information.

#### **D. Procurement**

48. **The project implementation does not require any procurement arrangements as the operation does not finance acquisition of goods, services, works, or infrastructure spending.** The disbursement category is the contingent capitalization of the FEE, considered the final destination of the funds. However, World Bank's Anti-corruption guidelines do apply and governance arrangements need to be adequate at the final beneficiary of the loan proceeds.

49. **The CND will implement the Project in accordance with the objectives of the Anti-Corruption Guidelines (ACGs) applicable to this operation.** In accordance with Uruguay's laws and regulations, investigations under the Project will be undertaken by GoU, including investigations requested by the Bank. The GoU will keep the Bank abreast of investigations' progress and findings, and the conclusion of investigations will be made public.

50. **The GoU has confirmed that investigations will be coordinated with the Bank, on a case-by case basis.** The above-outlined arrangements are appropriate to ensure that the Project is carried out in accordance with the ACGs, based on (a) GoU's systems to handle fraud and corruption risks under, and (b) the overall low fraud and corruption risk of the Project. Uruguay has both a strong legal framework and high institutional capacity to address fraud and corruption risks which is in compliance with international principles and procedures.

#### **E. Social assessment (including Safeguards)**

51. **Given its nature and development objectives, this project does not have specific target group beneficiaries.** The potential positive benefits of stabilization are expected to be shared by the entire population of the country. On the other hand, the operation is not likely to generate adverse impacts on human populations and no safeguards are triggered as no physical investments are anticipated under the Project; rather it will provide funding to the FEE. The Indigenous Peoples Policy is not triggered because there are no Indigenous Peoples in the project's area of influence, and the Involuntary Resettlement Policy is not triggered because no involuntary taking of land is expected.

52. **However, the project will benefit disproportionately the poor as lower income groups spend a larger share of their incomes on electricity and tariffs stability will prevent relative higher losses to these groups.** Figure 3 shows the effect of increases in energy tariffs on the income of population's percentiles. This Figure suggests that the bottom income groups are the most affected by electricity tariff increases.

#### **F. Environment (including Safeguards)**

53. **Given the project's objectives, scope and design the project would not generate any adverse environmental impacts.** The project does not contemplate any physical investments and consists of a single component that provides contingent funding to an Energy Stabilization Fund. In the event the project disburses the funds will be transferred to the Energy Stabilization Fund. The project has been rated as environmental risk Category C, a rating that has been confirmed at Concept Stage, given that the project is not likely to generate adverse impacts on environmentally important area.

## **ANNEX 1: RESULTS FRAMEWORK AND MONITORING**

**Country: Uruguay**

**Project Name: Uruguay Drought Events' Impact Mitigating Investment Project Financing (P149069)**

### **Results Framework**

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#### **Project Development Objectives**

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##### PDO Statement

The Program Development Objectives of the proposed operation are to enhance the GoU's efforts to mitigate the effect of adverse weather conditions on its public sector accounts and to improve the efficiency of its weather-related risk management framework.

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**These results are at** | Project Level

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#### **Project Development Objective Indicators**

Indicator Name	Baseline	End Target
Additional financing needs from the central government to cover Additional Cost of Electricity Generation in drought events of moderate probability-moderate impact (Additional Costs of Electricity Generation in drought events minus FEE's available funds (including the contingent financing). (Amount(US\$ million))	500.00	200.00
Share of the Additional Cost of Electricity Generation in drought events of moderate probability-moderate impact that is covered by the FEE's Targeted Level of Coverage by the Fund (VOCF). (Percentage)	85.00	95.00

### Indicator Description

#### **Project Development Objective Indicators**

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Additional financing needs of the central government associated to drought	Additional financing needs from the central government to cover Additional Cost of Electricity Generation in drought in drought events of moderate probability-moderate impact	Annual	UTE (data, SimSEE model), ADME, World Bank	CND will with UTE support present a report annually.
Share of the Additional Cost of Electricity Generation in drought events of moderate probability-moderate impact that is covered by the FEE's Targeted Level of Coverage by the Fund (VOCF).	The second indicator measures the level of risk coverage that the Targeted Level of Fund Coverage (VOCF) provides. $=\{1-[(VOCF_t-VOCF)/VOCF]\}*100$ / where VOCF <sub>t</sub> is the Observed Level of Coverage by the Fund and VOCF is the Targeted Level of Coverage by the Fund (VOCF). This indicator will help to monitor if UTE makes sufficient contributions to the FEE to achieve an adequate level of risk coverage. As the energy matrix evolves, the necessary resources to cover the same level of risks are expected to be adjusted periodically. These adjustments to the maximum level of contributions are expected to enhance the efficiency of the FEE, but they need to preserve an adequate level of risk coverage. Therefore, the success of the project will be reflected in keeping the risk coverage at the targeted level defined by the GoU.	Annual	UTE (SimSEE model)	CND, UTE

**ANNEX 2: DETAILED PROJECT DESCRIPTION**  
**URUGUAY: Uruguay Drought Events' Impact Mitigating Investment Project Financing**

*Background of the Energy Stabilization Fund (FEE)*

1. **The Energy Stabilization Fund (FEE)** was created in 2010 (Law No. 18.719, article 773 of December 27, 2010) as a mechanism to help stabilize electricity tariffs in the face of weather events, which affect significantly the cost of generating the electricity required to satisfy the projected demand, reducing the negative impact of hydropower deficits on the financial situation of the (UTE) and on public finances. It is a sole-purpose fund, established within the National Development Commission (CND) which acts as the trustor. The Law 18.719 stipulates that the fund can have funds of up to 4 billion *unidades indexadas*, inflation-indexed monetary units which currently is the equivalent of US\$480 million. However, the Decree 442/011 modified in October 2014 by Decree 305/014 establishes that the target level of the fund coverage (TLFC, or *Valor Objetivo de Cubertura de Fondo, VOCF*) computed every year as the difference between the Supplying Cost of the Demand that is not exceeded with probability of 85 percent, expressed in USD, and the Expected Value of such cost
2. **The FEE's operating regulations are stipulated by the Decree 442/011 and modified by Decree 305/014 as presented below.** If the quarterly hydropower generated is below an inferior limit of 0.9 of a simulated long term historical average UTE can request the use of funds from FEE (Article 4 of Decree 442/011) to compensate the difference between the 90 percent of the estimated hydropower generation and the real hydropower generation. That difference is valued quarterly at average cost of energy in situation of hydro deficit, calculated from the statistical simulation done by ADME for the Seasonal Programming, expressed in USD/MWh (Article 5 of Decree 305/014). When applicable, the quarterly calculations of transfers from the FEE to UTE are made public on the website of the Electricity Market Administration (*Administración de Mercado Eléctrico - ADME*).

**(a) Contributions and Uses of the Energy Stabilization Fund**

The FEE's operating regulations are included in the Decree 442/011 and Decree 305/014.

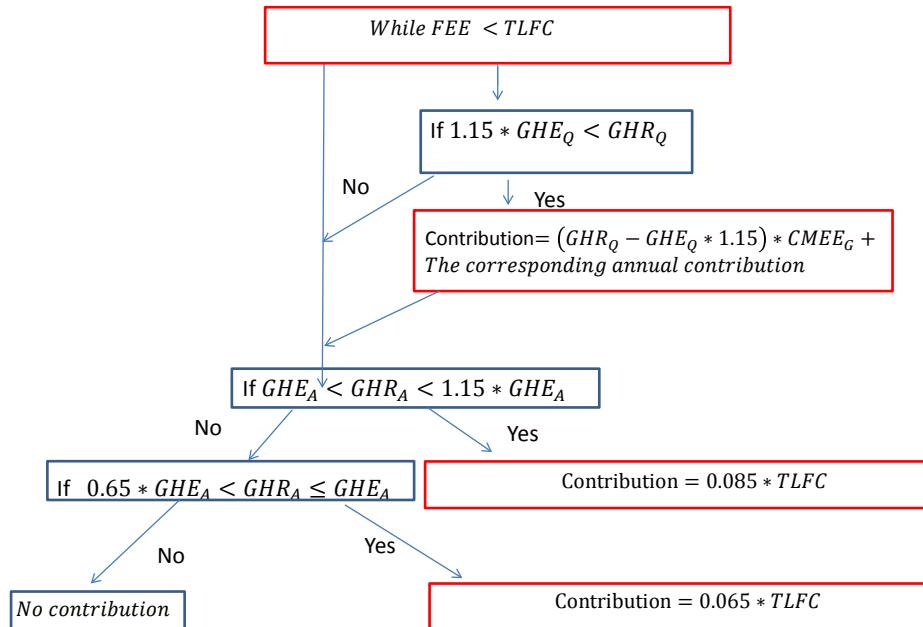
**(i) UTE Contributions to the FEE:**

3. **In November of each year UTE makes the calculations for the period 1<sup>st</sup> of December to 30th of November of the following year, using exclusively the simulation models and the assumptions of the corresponding Seasonal Programming published by ADME.**
4. **Contributions to the FEE made annually by UTE or by the Ministry of Economy and Finance to the General Revenues through earmarked transfers are calculated as follows:** Contributions to the Energy Stabilization Fund are made annually by UTE or the Ministry of Economy and Finance to the Treasury with dedicated funds and are calculated by comparing the Real Hydropower Generation (GHR) for the quarter or year, as applicable, as

reported by the Electric Market Administration (ADME), with the Expected Annual or Quarterly Hydropower Generation (GHE), as follows:

1. If the annual  $GHR_A$  is greater than 65 percent and less than or equal to 100 percent of the  $GHE_A$ , the contribution will be 6.5 percent of Targeted Level of Coverage of the Fund (TLCF) calculated for the year in USD.
2. If the annual  $GHR_A$  is greater than 100 percent of the  $GHE_A$ , the contribution will be 8.5 percent of the Targeted Level of Coverage of the Fund (TLCF) calculated for the year in USD.
3. If the quarterly  $GHR_Q$  is greater than 115 percent of the quarterly  $GHE_Q$ , there will be a variable contribution in inflation-indexed monetary units calculated as follows:  $(GHR_Q - GHE_Q * 1.15) * CMEEG$ . The corresponding annual contribution will also be made.
5. **The annual total of the variable contribution to the Energy Stabilization Fund from the above formula, plus the cost of energy provided** (as defined/calculated under b. Uses of Funds) will not exceed the Expected Cost of Forecast Energy (CEEP) forecast in the simulation models using the assumptions of Seasonal Programming (SP) for the period December-November, considering only the variable generation cost.
6. **The contributions established are made until the Energy Stabilization Fund reaches the TLCF calculated for the year.**

Figure A2.1 Rules for Annual Contributions of UTE to the FEE



Where

$CAD_E$  = Expected cost of Supply Electricity Demand

$CAD_{Q\ 85}$  =  $CAD_Q$  that is not exceeded with a probability of 85%, in USD,  
based on the simulations made for the SP

$GHE_{Q\ 85}$  = The estimated  $GHE_Q$  corresponding to  $CAD_{Q\ 85}$

$GHE_{Q\ 85}$  = The mean of  $GHE_Q$  simulated, conditional on  $CAD_Q$  being within  
+/-5% of  $CAD_{Q\ 85}$

$TLFC = CAD_{85} - CAD_E$

$GHR_A$  = Annual Real Hydropower Generation

$GHR_Q$  = Quarterly Real Hydropower Generation

$GHE_A$  = Expected Annual Hydropower Generation

$GHE_Q$  = Expected Quarterly Hydropower Generation

$CMEDH_Q = \frac{(CAD_{Q\ 85} - CAD_E Q)}{(GHE_Q - GHE_{Q\ 85})}$ , in USD/MWh

$CMEG$  = Is ratio of the expected annual electricity generation cost considering only the variable costs and the electricity produced by the respective sources of electricity generation.

Quarterly variable transfers are made while:

$$\left( \sum_{Q=1}^4 (GHR_Q - GHE_Q * 1.15) * CMEG + \text{Cost of transmitted electricity} \right) \leq CEEP$$

In the fiscal accounting the contributions from UTE to the FEE are recorded as expenditure (“above the line” according to IMF methodology) in UTE’s books.

## (ii) *Uses of the FEE funds by UTE*

7. The use of funds is also determined by decree by the Executive power (it requires the signature of the Ministry of Industry, Energy and Mining, Ministry of Economy and Finance and the President of the Republic) and decided in collaboration with UTE. UTE decides on the use of the Energy Stabilization Fund within 10 working days after the end of each quarter, comparing the  $GHR_Q$  for the quarter with the Lower Hydropower Limit ( $LIH_Q$ ).

Where

$LIH_Q$  = 90% of  $GHE_Q$

Maximum use of FEE funds =  $(LIH_Q - GHE_Q) * CMEDH_Q$ , in USD

8. The valuation of the difference between the  $GHR_Q$  and the  $LIH_Q$  is done with  $CMEDH_Q$  of the corresponding quarter (expressed in US dollars). The average cost of energy

in hydro deficit situation is calculated in the statistical simulations done by ADME for the Seasonal Programming and is expressed in USD/MWh.

**9. The FEE can be funded with internal government resources provided by *Rentas Generales*, funds contributed by UTE, and external financing. However, it is expected that the Fund should function and be sustainable with the foreseen transfers made by UTE and their extractions whenever there is less hydropower than expected.** According to Article 3 of Decree 422/011 and its amendment through Decree 305/014 UTE transfers to FEE should be made annually and the size of the transfers is associated to the generated hydropower. For example, whenever the actual generated hydropower is above 65 percent the expected one and below 100 percent the transfer is 6.5 percent of the TLCF in USD. When it is above 100 the transfers are 8.5 percent of the TLCF.

**10. The FEE financial flows need to be regularly reported and FEE's assets are to be invested following the same investment policies used for the country's international reserves (Article 8 Decree 305/014).** In December of each year UTE should submit a report to the Ministry of Industry, Energy, and Mining on the results of the calculations and prepares, in cooperation with the National Development Corporation, a report on the performance of the Energy Stabilization Fund. That report is presented to the Ministry of Industry, Energy, and Mining and the Ministry of Economy and Finance so that they can monitor the Energy Stabilization Fund. The trustee CONAFIN AFISA with advise from the BCU will determine in what assets that could constitute international reserves will the FEE funds be invested. The funds will be deposited at the Central Bank of Uruguay (BCU) in order for this to purchase international reserve type assets<sup>11</sup>.

*Providing the FEE with sufficient resources to enhance its contribution to the integrated risk-management strategy of GoU and ensuring additional coverage during a period of significant changes in the energy matrix aimed at reducing these vulnerabilities.*

**11. The upcoming years are critical for Uruguay from the point of view of its vulnerability to weather events while it is undergoing a dramatic change of its energy matrix to one more resilient to weather-related events and more cost-effective.** As a result, drought risks affecting electricity generation costs could impact UTE and GoU's finances substantially. The proposed operation will provide further protection during this transitional period.

**12. The proposed operation will provide contingent financing to the CND to capitalize the FEE, through CONAFIN AFISA as trustee of the FEE, so as to enable the FEE to provide additional resources needed by UTE to face adverse weather related unexpected electricity generation costs.** 1. The contingent financing will be triggered in case the withdrawal

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<sup>11</sup> The Energy Stabilization Fund is composed of external reserve assets, which are obtained by the Central Bank of Uruguay, in accordance with the terms and conditions agreed with the trustee. The central bank US\$ Liquidity fund has an investment horizon of 3 months, its benchmark is the index G0B1 (UST 0 - 3 months), and its eligible assets are composed of US government bonds, other government bonds, agencies, supra-nationals with AA-minimum credit rating. The duration of the fund cannot differ in more than 0.3 years with the BMK, spread duration should be at most 0.35 years, and optionality should be at least -0.15, and currency deviation from US\$ is not permitted.

conditions set forth in the loan agreement for the project have been met and will be used according to the rules of use of the FEE funds stipulated in the Decree 422/11 and its amendment through Decree 305/014, which ensures that funds can be transferred to UTE only in adverse weather conditions. In addition, the contingent financing will be triggered once the FEE funds fall below a minimum level set at US\$50 million to ensure that before disbursements are triggered the funds accumulated in the FEE are used to avoid circumstances in which, despite the fact that the first trigger is activated (adverse weather conditions), there is no need to disburse as the FEE has sufficient funds to face the probable increased electricity generation costs associated to the weather shock.

**13. The project contributes to further strengthen governance and efficiency of the FEE through other conditions necessary for disbursement.** Under the project, the CND will cause the trustee CONAFIN AFISA to prepare annual budgets of the operating costs CONAFIN AFISA expects to incur in the following calendar year in relation to managing the FEE and present these budgets not later than November 30<sup>th</sup> of each year during Project implementation to the no objection of MEF to ensure transparency and that the FEE's funds are used for the designated purpose. Related to that, the FEE is also required to have at all times throughout the implementation of the Project, a minimum balance of US\$500 thousand to cover the costs relating to the management of the FEE's funds, kept in a dedicated account at BROU. Other requirement agreed is that the CND will cause CONAFIN AFISA to prepare and provide to the Bank no later than 30 days after the end of the respective quarter: a) quarterly reports on the overall balance of the FEE's funds as of the end of the corresponding quarter and make it publicly available on the CND's website; and b) a report on the use of the FEE's funds (including returns and losses from said investments) during the same quarter of the FEE Balance Report<sup>12</sup>. Finally, the sixth obligation is that, with support from UTE, and not later than April 30<sup>th</sup> of each year during Project implementation the CND shall cause CONAFIN AFISA to prepare (in accordance with the methodology set forth in Article 2 of Decree 442/011 and its amendment Decree 305/014) and submit to the Bank an annual report assessing the Targeted Level of Fund Coverage of the FEE in order to ensure the regular updating of this ceiling and its optimization<sup>13</sup>.

## **Project Design**

### **G. Project Components**

**14. There is only one component of the project: Leveraging the FEE ability to mitigate the effects of adverse weather conditions by providing \$200 million in contingent financing to CND to capitalize the FEE, through provision of financing to CONAFIN AFISA as trustee of the FEE.** The component consists of the contingent financing provided to CND that will on-lend the proceeds to the FEE through the trustee CONAFIN AFI S.A for the purposes set in the Decree 442 and modified by Decree 305/014 in the event of adverse weather conditions. This contingent financing will contribute to reducing the probability of Government having to

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<sup>12</sup> FEE funds are invested in similar portfolios in which International Reserves are invested.

<sup>13</sup> During preparation, the Bank and UTE teams developed a dynamic risk management tool that enable the calculation of ceilings that correspond to certain levels of risk coverage and take into consideration the evolution of the energy matrix.

transfer resources to UTE and the amount of these additional transfers needed by UTE to face weather related unexpected costs of electricity generation.

**15. The following disbursement conditions need to be met for the loan to be disbursed:**

- (i) the Real Quarterly Hydraulic Generation for a respective calendar quarter is equal to or lower than 90% of the Expected Quarterly Hydraulic Generation, as evidenced by an Hydraulic Report issued by UTE for this quarter; and
- (ii) the above condition has been caused by a drought event as confirmed by a resolution issued by UTE, issued and submitted to the Bank within 12 months from the end of the quarter during which the condition (i) has occurred
- (iii) FEE's balance is less than the equivalent amount of fifty million Dollars (\$50,000,000), as evidenced by either: (a) A FEE Balance Report issued for the same quarter for which the Hydraulic Report has been issued; or (b) a statement issued by CONAFIN AFISA and submitted to the Bank within 12 months from the end of the quarter during which the condition referred to in (i) has occurred.

The following covenants are included in the Loan Agreement:

- (i) The funds in the FEE are a minimum of US\$500 thousand to cover the administrative cost of the trustee.
- (ii) The annual budget of the operating costs of the trustee, CONAFIN AFISA are allocated and presented for no objection to the MEF.
- (iii) Presentation of the quarterly report on the overall position of FEE's funds invested by the Central Bank of Uruguay
- (iv) The annual report assessing the value of the ceiling of the fund consistent with the targeted risk coverage level of the FEE in order to ensure the regular updating of this ceiling and its optimization(*VOCR-Valor Objetivo de Cobertura de Riesgo*) is prepared and approved by April 30 of every year.

**ANNEX 3: IMPLEMENTATION ARRANGEMENTS**  
**URUGUAY: Uruguay Drought Events' Impact Mitigating Project**

**1. Project Institutional and Implementation Arrangements**

1. **The proposed operation will be implemented over a three-year period; overall coordination and implementation will be the responsibility of the National Development Corporation (CND) and the Ministry of Economy and Finance.** The proposed operation will rely on implementation arrangements between CND and its 100 percent controlled company CONAFIN AFISA.
2. **Given that the FEE does not have independent legal personality a Trust Fund will be established, with CND acting as the Trustor and CONAFIN AFISA as the Trustee of the FEE.** The CND will make the proceeds of the Loan available to CONAFIN AFISA, as trustee of the FEE pursuant to the provisions of the Administrative Trust Agreement, under the subsidiary agreement between CND and CONAFIN AFISA under terms and conditions satisfactory to the Bank.
3. **The proposed Project will be implemented by CND and the subsidiary agreement by CONAFIN AFISA, a subsidiary Company of CND, which is the Trustee of the Energy Stabilization Fund (FEE).** To facilitate the carrying out of the Project, CND will make the proceeds of the Loan available to CONAFIN AFISA, as trustee of the FEE pursuant to the provisions of the Administrative Trust Agreement, under a subsidiary agreement between the CND and the CONAFIN AFISA under terms and conditions satisfactory to the Bank, which shall include, inter alia: (a) the provisions of the Administrative Trust Agreement; (b) the provisions of Article V of the General Conditions; (c) the provisions of Schedule 2 of this Agreement; and (d) the obligation of CONAFIN AFISA to carry out the Project in accordance with the World Bank Anti-Corruption Guidelines.
4. **The CND will maintain CONAFIN AFISA with the necessary resources to carry out the Project, and with a composition and terms of reference satisfactory to the Bank.**
5. **CONAFIN AFISA will enter into an asset management contract with BCU to regulate the investment of the FEE's funds, all under terms and conditions satisfactory to the Bank.**
6. **Not later than 30th of November of each year during Project implementation, CND will cause CONAFIN AFISA to:** (i) submit to the MEF for its review and no objection an annual operating budget relating to expenses that CONAFIN AFISA expects to be incurred in the following calendar year in relation to managing the FEE; and (ii) make said budget publicly available on CND's website.
7. **During Project implementation, CND will cause CONAFIN AFISA to prepare and provide to the Bank, on a quarterly basis, not later than 30 days after the end of the respective quarter:** (i) a report on the balance of FEE's funds as of the end of the corresponding quarter (FEE Balance Report) and make it publicly available on CND's website; and (ii) a report

on the use of the FEE's funds and the investments of the FEE's funds (including returns and losses from said investments) during the same quarter of the FEE Balance Report.

8. **Not later than April 30th of each year during Project implementation, the CND will cause CONAFIN AFISA to prepare (in accordance with the methodology set forth in Article 2 of Decree 442/011 and its amendment Decree 305/014) and submit to the Bank, a report assessing the Targeted Level of Fund's Coverage** for the purposes set forth in Article 3 of Decree 442/011.

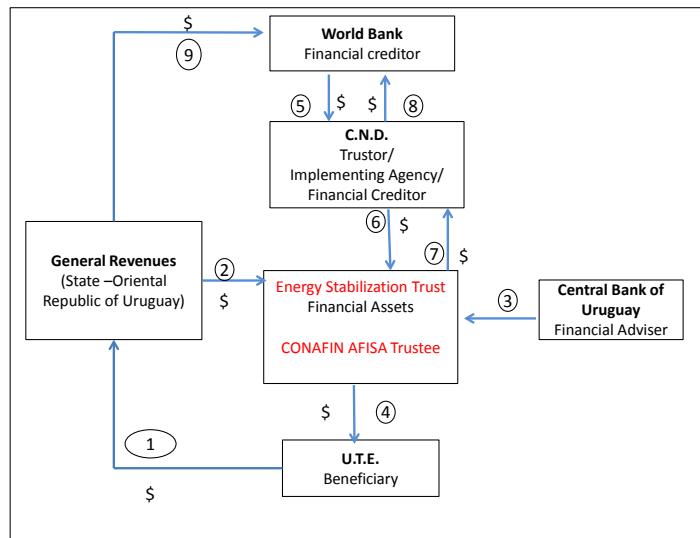
9. **The CND shall cause CONAFIN AFISA to ensure that the FEE maintains at all times, throughout the implementation of the Project, a minimum balance equivalent to \$500,000 to cover the costs relating to the management of FEE's funds.**

10. **The CND will be responsible for fiduciary, management, and monitoring and evaluation tasks.** The CND will be responsible for monitoring the conditions for disbursements and of requesting the disbursement of the contingent financing if the disbursement conditions are met and will be responsible for disbursing to the Energy Stabilization Fund, as part of the on-lending operation. The Trustor will monitor compliance with the rules of disbursement and will be responsible for certifying that the conditions are met and for informing the World Bank once the conditions for disbursement have been met. The Trust Fund will be funded with internal government resources provided by *Rentas Generales*, funds contributed by UTE, and external financing.

11. **Upon the Bank's request the Borrower will provide the Bank with an audit of the deposit account and a written confirmation that the amount of the disbursement has been credited to the account of the Energy Stabilization Fund managed by the Trustee CONAFIN AFISA.**

12. **The previously mentioned tasks, roles and responsibilities of each stakeholder will be further defined through inter-institutional agreements.** Framework agreements including all technical, economic, financial of the operation that parties need to take into account and implement are under preparation.

**Figure A3.1. Institutional arrangements**

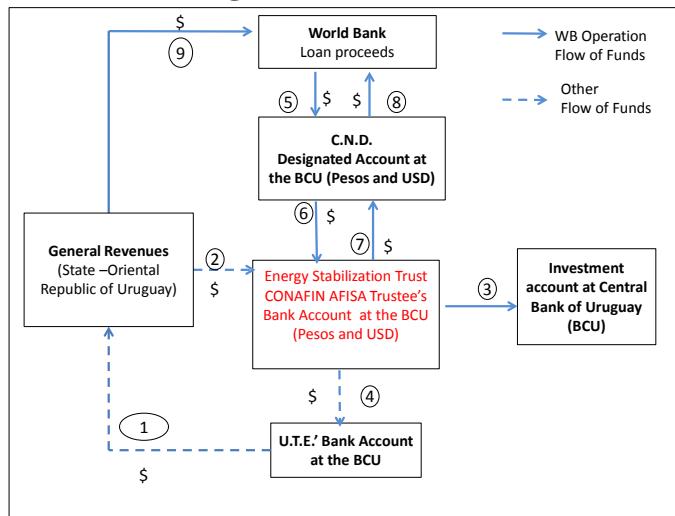


- (i) Contributions from UTE through the General Revenues in accordance with Article 1 to 3 Decree 442/011 and Article 2 of Decree 305/014.
- (ii) Contributions from General Revenues to the Energy Stabilization Trust Fund, in accordance with Art. 1 to 3 of Decree 442/011 and Article 2 of Decree 305/014.
- (iii) The Central Bank of Uruguay opens a special account in the name of CONAFIN AFISA for the Trust Funds to be invested and as financial management advisor, provides information for the various international reserve investment portfolios and advises CONAFIN AFISA on how to invest the Trust Funds as stipulated in article 8 of Decree 442/011 and Article 4 of Decree 305/014.
- (iv) U.T.E. requests the release of funds from the Trust in the case that the conditions of the use of funds as specified in Article 4 of Decree 442/011 are met with the valuation calculated as per Article 3 of Decree 305/014.
- (v) Disbursement of the loan from the World Bank to C.N.D. in the case the defined disbursement conditions are met.
- (vi) The loan proceeds are disbursed as per the Subsidiary Agreement between CND and CONAFIN AFISA to the Energy Stabilization Trust Fund.
- (vii) Repayment of the loan by CONAFIN AFISA to C.N.D. with Funds from the Energy Stabilization Trust Fund (received from U.T.E. and/or General Revenues).
- (viii) Loan repayment to the World Bank by C.N.D. with funds received from the Trust (as loan payment by CONAFIN AFISA to C.N.D.).

(ix) Loan repayment to the World Bank with General Government funds if CND cannot repay the loan in accordance with the sovereign guaranty.

### 13. The flow of funds related to this operation are as follows

**Figure A3.2. Flow of Funds**



- (i) Contributions from UTE through the General Revenues in accordance with Article 1 to 3 Decree 442/011 and Article 2 of Decree 305/014.
- (ii) Contributions from General Revenues to the Energy Stabilization Trust Fund, in accordance with Art. 1 to 3 of Decree 442/011 and Article 2 of Decree 305/014.
- (iii) The Central Bank of Uruguay opens a special account in the name of CONAFIN AFISA for the Trust Funds to be invested and as financial management advisor, provides information for the various international reserve investment portfolios and advises CONAFIN AFISA on how to invest the Trust Funds as stipulated in article 8 of Decree 442/011 and Article 4 of Decree 305/014.
- (iv) U.T.E. requests the release of funds from the Trust (within 10 working days following the end of each quarter) in the case that the conditions of the use of funds as specified in Article 4 of Decree 442/011 are met with the valuation calculated as per Article 3 of Decree 305/014 for further transfer to UTE which when made will be accounted for in UTE's budget management system for regular spending
- (v) Disbursement of the loan from the World Bank in USD to the a CND Designated Bank Account at the Central Bank of Uruguay, in the case the defined disbursement conditions are met and the funds of the Trust fall to or below \$50 million, with the sovereign guarantee of the Oriental Republic of Uruguay.
- (vi) The loan proceeds in USD are disbursed as per the Subsidiary Agreement to the CONAFIN AFISA Energy Stabilization Trust Fund Bank Account within the Central Bank of Uruguay.

- (vii) Repayment of the loan by CONAFIN AFISA from the special account with the Central Bank of Uruguay to C.N.D's Central Bank of Uruguay Designated Account, with Funds from the Energy Stabilization Trust Fund (received from U.T.E. and/or General Revenues).
- (viii) Loan repayment to the World Bank by *C.N.D.* from its BCU Bank Account, with funds received from the Trust (as loan payment by CONAFIN AFISA to *C.N.D.*)
- (ix) Loan repayment to the World Bank by the Oriental Republic of Uruguay in accordance with the terms of the guarantee agreement.

*Project administration mechanisms*

14. **The proposed Project will be administered by CND and the CONAFIN AFISA, a subsidiary Company of CND, which is the Trustee of the Energy Stabilization Fund (FEE).**
15. **The CND will be responsible for fiduciary, management, and monitoring and evaluation tasks.** The CND will be responsible for monitoring the conditions for disbursements and of requesting the disbursement of the contingent financing if the disbursement conditions are met and will be responsible for disbursing to the Energy Stabilization Fund, as part of the on-lending operation. The Trustor will monitor compliance with the rules of disbursement and will be responsible for certifying that the conditions are met and for informing the World Bank once the conditions for disbursement have been met. The CND will also monitor compliance with Bank safeguard and compiling information from. The Trust Fund will be funded with internal government resources provided by *Rentas Generales*, funds contributed by UTE, and external financing.

16. **The previously mentioned tasks, roles and responsibilities of each stakeholder will be further defined through inter-institutional agreements.** Framework agreements including all technical, economic, financial of the operation that parties need to take into account and implement are under preparation.

## **2. Financial Management, Disbursements and Procurement**

### **a) Financial Management**

17. **A Financial Management Assessment of the arrangements for the proposed Project was carried out in accordance with OP.BP 10.00 and in line with Bank specific guidelines found that the FM arrangements for the proposed operation meet Bank requirements and are acceptable to the Bank.** The assessment concluded that CND' and CONAFIN AFISA budgeting, accounting, internal control, funds flow, financial reporting and auditing arrangements: (a) are capable of correctly and completely recording all transactions and balances relating to the Project; (b) facilitate the preparation of regular, timely and reliable financial statements; (c) safeguard the Project's assets; and (d) are subject to auditing arrangements acceptable to the Bank. No major FM risks were identified for the Project and no mitigation measures were proposed. The proposed organizational arrangement for the project comprising

CND's and CONAFIN AFISA structure are considered satisfactory. FM key personal, which are CND employees and its controlled company, CONAFIN AFISA, are considered competent and adequately skilled.

**18. The Financial Management (FM) implementation arrangements will be the same operating at the company level at National Development Corporation (CND) and its 100 percent controlled company *Corporación Nacional Financiera Administradora de Fondos de Inversión S.A.* (CONAFIN AFISA), since the project comprises an operation with a contingent payment upon meeting the defined disbursement conditions.**

**19. CONAFIN AFISA will maintain a financial management system in accordance with the provisions of Section 5.09 of World Bank's General Conditions.**

**20. CND has an Internal Audit Department (IAD) that will prepare an annual audit plan and periodic progress reports.** CND and CONAFIN AFISA annual financial statements are audited by Crowe Howarth (Stavros, Moyal y Asociados) and Grant Thornton, respectively. The consolidated financial statement of CND as an entity and the financial statement audit report of CONAFIN AFISA will be furnished to the Bank, as soon as available, but in any case not later than six months after the end of each audited year/period. The financial audit will be conducted by the current private audit firms performing the year/period audits, as mentioned above or by other independent auditor acceptable to the Bank. Since both entities are State Owned Enterprises, the Uruguayan Supreme Audit Institution, (*Tribunal de Cuentas de la República*) may perform the audits as well if time and capacity allows the inclusion of such entities in its annual audit plan. In addition, the Bank will require this continuing audit of CND's financial statements, acceptable to the Bank and due no later than June 30 of each year after the date of loan effectiveness. Last CND consolidated financial statements, as of December 31, 2013 had qualified audit opinions. However, the financial statements were reviewed by financial management and deemed acceptable with no accountability issues nor significant deficiencies identified by the auditors.

**21. CND and CONAFIN AFISA are successfully overseeing financial management functions such as, accounting, reporting, internal control, and interaction with the Bank and the external auditors on FM issues.** CND and CONAFIN AFISA FM staff are qualified and committed. The proposed organizational arrangement for the Project are the same currently operating at each respective entity and are considered satisfactory.

**22. Budgeting and counterpart funding arrangements.** The Borrower's proposed budgeting arrangements comprise a specialized budgeting system (ADAPTIVE PLANNING) applied by the Entity and a specific accounting and management information system (GIA), which is currently used for accounting, billing, payments, and purchases.

**23. Accounting and maintenance of accounting records.** The accounting system in place for CND and CONAFIN AFISA will be used to record Project transactions. The transactions will be processed in the accounting and management system GIA. The chart of accounts will reflect the Energy Stabilization Fund. The system is acceptable to the Bank.

**24. Internal controls and internal auditing.** The Internal Audit Office (*Auditoria Interna de la Nación*) is responsible for internal audits of the Central Administration, decentralized entities and state owned enterprises. It depends functionally and financially on the Ministry of Economy and Finance. However, CND has an Internal Audit Department (IAD) that reports to the Board of Directors. It has technical autonomy and access to financial records. The IAD periodically prepares an annual audit plan and progress reports against the plan. The IAD uses International Audit Standards equivalent to Organization of Supreme Audit Institutions (INTOSAI) standards. The internal control procedures that have been incorporated into the Entity's Operational Manual and Procedures will hold for the new operation with some adjustments as needed. Moreover, there is a department of internal audit in CND, which also audits affiliated companies such as CONAFIN AFISA. This department is composed of very professional and competent internal auditors. It reports directly to the Audit Committee and the Board of Directors, above the management structure, which gives it independence. Audit Committee conveys the different departments the audit observations and requests the corrective actions to addressed identified weaknesses.

**25. FEE Intermediate Unaudited Financial Reports.** CND and CONAFIN AFISA will prepare and furnish to the Bank as part of the Project Report and not later than 45 days after the end of each calendar quarter, interim unaudited financial reports for the Project; that is, the FEE intermediate unaudited financial reports, covering the quarter, in form and substance satisfactory to the Bank.

**26. Annual Financial Reporting.** The Annual financial statements for the Project will be prepared by the CND and CONAFIN AFISA following the IFRS (International Financial Reporting Standards), which are used by Uruguay and are mandatory for CND and CONAFIN AFISA's Financial Statements.

**27. Arrangements for External Audit.** CND and CONAFIN AFISA will have their respective consolidated Financial Statements audited in accordance with the provisions of Section 5.09 (b) of the General Conditions. As per the provisions of the Administrative Trust Agreement the Financial Statements of the FEE will be audited each fiscal year and this audit will be presented to the World Bank as part of the Project implementation. Each audit of the Financial Statements will cover the period of one fiscal year of the CND starting with the fiscal year in which the loan has been declared effective. The Bank will require an audit of FEE's financial statements acceptable to the Bank and due no later than six months after the close of the fiscal year, or June 30 of each year, if it takes place in December 31 of each year, after the date of loan effectiveness. The Bank will require a continuing Entity audit of CND and CONAFIN AFISA's financial statements acceptable to the Bank and due no later than six months after the close of the fiscal year of each Entity, or June 30 of each year, if it takes place in December 31 of each year, after the date of loan effectiveness.

**28. Disclosure of Audited Financial Statements.** CND will disclose the Project audited financial statements following its own standard procedures for disclosure of financial statements of multilateral financed projects. Following the formal receipt of the audited financial statements, the Bank will also make them available to the public in accordance with the World Bank Policy on Access to Information.

## b) Disbursements Arrangements and Flow of Funds

29. **The disbursement methods to be used under this operation to transfer the proceeds of the World Bank Loan to CONAFIN AFISA, for further transfer to the FEE for its capitalization once the defined disbursement conditions are met are Advance and Reimbursement.** The proceeds of the Loan will be disbursed in U.S. dollars in a CND Designated Account denominated in U.S. dollars in Banco Central del Uruguay (BCU) in Montevideo. Upon deposit by the Bank of the proceeds of the Loan, the Borrower (CND) will notify, within 30 days, receipt of the funds and the transfer of an equivalent amount to the FEE for further transfer to UTE (all these accounts will be at the Central Bank in USD) which if and when transferred should be accounted for in UTE's budget management system for regular spending.

30. CND will manage the DA and will be also responsible for preparing the bank account reconciliation on a monthly basis. Withdrawals from the Designated Account will be solely made for payments of eligible expenditures. As eligible expenditures arise, funds will be deposited into the DA.

31. The Eligible Expenditures that may be financed out of the proceeds of the Loan is the FEE capitalization, and the percentage of expenditures to be financed for Eligible Expenditures is 100 percent as in the Table below::

Category	Amount of the Loan Allocated (expressed in USD)	Percentage of Expenditures to be financed inclusive of Taxes
(1) FEE Capitalization	200,000,000	100%
TOTAL AMOUNT	200,000,000	

32. No withdrawal shall be made from the Loan Account unless and until CND has provided the Bank with satisfactory evidence that:

- (a) the Real Quarterly Hydraulic Generation for a respective calendar quarter is equal to or lower than 90% of the Expected Quarterly Hydraulic Generation, as evidenced by an Hydraulic Report issued by UTE for this quarter; The calculations will be done using exclusively the simulation models and the assumptions of the corresponding Seasonal Planning published by the *Administracion de Mercado Electrico (ADME)*.and;
- (b) the condition referred to in (a) above has been caused by a draught event as confirmed by a resolution issued by UTE. Such resolution shall have been issued and submitted to the Bank within 12 months from the end of the quarter during which the condition under sub-paragraph (a) above has occurred; and
- (c) FEE's balance is less than the equivalent amount of fifty million Dollars (\$50,000,000), as evidenced by either: (A) a FEE Balance Report issued for the same quarter for which the Hydraulic Report under (a) has been issued; or (B) a statement issued by CONAFIN AFI S.A. and submitted to the Bank within 12 months from the end of the quarter during which the condition referred to in (a) above has occurred; and
- (d) the Bank has received payment in full of the Front-end Fee

The legal covenants require that the following documentation be presented within the specified timeline:

- (e) The CND will maintain CONAFIN AFISA with the necessary resources to carry out the Project, and with a composition and terms of reference satisfactory to the Bank.
- (f) Not later than 30 days after the Effective Date the CND shall cause CONAFIN AFI S.A. to enter into an asset management contract with BCU to regulate the investment of the FEE's funds, all under terms and conditions satisfactory to the Bank.
- (g) Not later than November 30 of each year during Project implementation, CND shall cause CONAFIN AFISA to: (i) submit to the MEF for its review and no objection an annual operating budget relating to expenses that CONAFIN AFISA expects to be incurred in the following calendar year in relation to managing the FEE; and (ii) make said budget publicly available on CND's website.
- (h) During Project implementation, CND shall cause CONAFIN AFISA to prepare and provide to the Bank, on a quarterly basis, not later than 30 days after the end of the respective quarter: (i) a report on the balance of FEE's funds as of the end of the corresponding quarter (FEE Balance Report) and make it publicly available on CND's website; and (ii) a report on the use of the FEE's funds and the investments of the FEE's funds (including returns and losses from said investments) during the same quarter of the FEE Balance Report.
- (i) Not later than April 30 of each year during Project implementation, the Borrower shall cause CONAFIN AFI S.A. to prepare (in accordance with the methodology set forth in Article 2 of Decree 442/011 and its amendment through Decree 305/014) and submit to the Bank, a report assessing the Targeted Level of Fund's Coverage for the purposes set forth in Article 3 of Decree 442/011.
- (j) CND shall cause CONAFIN AFISA to ensure that the FEE maintains at all times, throughout the implementation of the Project, a minimum balance equivalent to \$500,000 to cover the costs relating to the management of FEE's funds.

33. The disbursements will be requested electronically by CONAFIN AFISA attaching the documentation that demonstrate the fulfillment of the disbursement conditions.

### c) Procurement

**34. The project implementation does not require any procurement arrangements as the operation does not finance acquisition of goods, services, works, or infrastructure spending.** The disbursement category in this operation is the contingent capitalization, through the CND, of the Energy Stabilization Fund, which is considered the final destination of the funds from the point of view of the World Bank operation. However it is worth highlighting that Anti-corruption guidelines do apply and it is important that the governance arrangements be adequate.

35. The Borrower is committed to implementing the Project in accordance with the objectives of the Anti-Corruption Guidelines (ACGs) applicable to this operation. In accordance with Uruguay's laws and regulations, investigations under the Project will be undertaken by the Government of the Oriental Republic of Uruguay (GoU), including investigations requested by

the Bank. The GoU will keep the Bank abreast of investigations' progress and findings, and the conclusion of investigations will be made public.

36. The GoU has confirmed that investigations will be coordinated with the Bank, on a case-by case basis. The above-outlined arrangements are appropriate to ensure that the Project is carried out in accordance with the ACGs, based on (a) GoU's systems to handle fraud and corruption risks under, and (b) the overall low fraud and corruption risk of the Project in the Uruguayan context. Uruguay has both a strong legal framework and high institutional capacity to address fraud and corruption risks. This legal framework is in compliance with the principles and procedures recognized at an international level.

#### *Monitoring & Evaluation*

37. The CND will monitor and evaluate the progress of the Project and prepare Project Reports in accordance with the provisions of Section 5.08 of the General Conditions and on the basis of indicators acceptable to the Bank. Each Project Report shall cover the period of one calendar semester, and shall be furnished to the Bank not later than 45 days after the end of the period covered by such report.

38. The report on the execution of the Project shall be furnished to the Bank not later than six months after the closing of the Project.

#### **39. The Project would also involve of other agencies:**

(a) *Usinas and Transmisiones Eléctricas (UTE)* is the beneficiary of the Trust Fund as per Decree 442/011. UTE will be responsible for making the necessary calculations for the uses and withdrawals from the Energy Stabilization Fund, as per Decree 442/011, using information published by the Administracion del Mercado Electrico (ADME). UTE will transfer annually, if conditions of contributions are met, the amount determined as per the rules of the Decree 442/011. It will also provide the information for the preparation of the Annual report on the Targeted Value of Risk coverage of the Energy Stabilization Fund. UTE in collaboration with CND will prepare an annual report on the evolution of the Energy Stabilization Fund.

(b) *Ministry of Economy and Finance (MEF)* will by ministerial resolutions need to approve the borrowing or debt issuance by CONAFIN AFISA on behalf of the Trust Fund. It will also give the no objection to the annual budget of the Trust. Any disbursement would require ministerial resolution. In case there are no sufficient funds in the Trust Fund to service its debt the MEF will transfer the necessary funds for debt repayment.

(c) *CONAFIN AFISA* as the Trustee of the FEE will be responsible for administering the Trust Funds as stipulated in the Administrative Trust agreement expected to be signed by the end of December. CONAFIN AFISA, as Trustee would be responsible for preparing an annual budget for the Trust and present it for no objection to the MEF. It will also be responsible for deciding, with the advice of the Central Bank of Uruguay, how the funds of the Trust Fund will be invested in accordance with the stipulations of Decree 442/011 and its amendments. The

decree stipulates that investments are to be made in international reserve asset class instruments, which are highly liquid and low-risk.

(d) *The Central Bank of Uruguay (BCU)* will be involved as financial management advisor, providing information for the various international reserve investment portfolios and advising *CONAFIN AFISA* on how to invest the Trust Funds, as stipulated in the Contract of Asset Management to be signed between *CONAFIN AFI S.A* and the Central Bank of Uruguay. The Funds are to be invested in international reserve assets class. The BCU will open an account in the name of *CONAFIN AFISA* in which the Trust Funds will be deposited and will execute the investment decisions of *CONAFIN AFISA*. The BCU will also be responsible for providing a quarterly report on the portfolio composition, overall return on investment, and the costs associated with investing the Trust Funds. The BCU will also be responsible for informing the *CONAFIN AFISA* on the investment position monthly.

**ANNEX 4: IMPLEMENTATION SUPPORT PLAN**  
**COUNTRY: Uruguay Drought Events' Impact Mitigating Investment Project Financing**

**Strategy and Approach for Implementation Support**

40. The strategy for Implementation Support Plan (ISP) by the Bank team reflects the nature of the Project and its risk profile. The strategy aims at making ISP to the client more efficient while remaining focused on implementation of the risk mitigation measures delineated in the SORT assessment. The ISP will be implemented by the Bank team involved in the operation and taking into account country level risks, legal framework and local context. It is also an indicative and flexible instrument which will be revisited during Project implementation and as part of the Implementation Supervision Report (ISR) reviews and adjusted based on what is happening on the ground.

**Overall Project Implementation.**

41. Ensuring a satisfactory implementation of the Project during the first 12 months will be critical. During that period the critical implementation areas are: risk assessment model and governance. The World Bank strategy to support implementation will rely on regular monitoring, interaction and advice to the CND. Even though CND has capable and experienced staff, hands-on and constant collaboration and advice will be necessary to address any challenges associated with the project.

The critical IPS areas as given the nature of the Project is:

- (a) Financial Management :
  - (ii) Closely supervise the Project's financial management; and
  - (iii) Review any audits or FM reports in a timely manner.
- (b) Legal: The Bank team will work closely with the PCU to help expedite the effectiveness due diligence
- (c) Monitoring and evaluation: The World Bank team will work closely with the PCU of CND to advise and support the monitoring and evaluation efforts

**Implementation Support Plan**

42. The Bank team will undertake field visits on a regular basis and have discussions with the PCU of CND, other stakeholders as well as the Project beneficiary. During Project implementation it will have an active engagement with at least one supervision mission per year (and more during the first year of implementation).

43. The team will also undertake regular and comprehensive fiduciary review, including thorough reviews of financial management reports and review of audits. As needed, the team will work together with the implementing agency to identify and address implementation challenges.

44. Implementation support will be carried out at the following levels:

- (a) Risk assessment: Technical staff will be located in the Buenos Aires and Washington offices. Risk assessment support by the Bank will include close collaboration between the World Bank team and UTE's risk management department: (i) to improve the risk management methodology used by UTE with the SimSEE model; (ii) to integrate a financial module that would allow dynamic financial analysis and inform the risk retention and risk transfer decisions.
- (b) Governance and capacity building: Support will be coordinated from Buenos Aires, with strong involvement of Washington-based staff to provide advice and support in enhancing the governance of the FEE and that of the Trustee CONAFIN AFISA.
- (c) Fiduciary: The World Bank staff will provide advice and support to the PCU of the CND and CONAFIN AFISA.
- (d) Fiscal framework: The World Bank staff from Washington will provide advice and support on how to better integrate the Energy Stabilization Fund supported through this operation with the fiscal framework of the country, how to improve recording of FEE transactions and FEE debt reporting.

45. The main focus of implementation support is summarized below.

<b>Time</b>	<b>Focus</b>	<b>Skills Needed</b>	<b>Resource Estimate</b>	<b>Partner Role</b>
<i>First twelve months</i>	<i>Risk assessment methodology</i>	<i>Insurance Specialist</i>	<i>\$15,000</i>	
<i>12-48 months</i>	<i>Risk assessment</i>	<i>Insurance specialist</i>	<i>\$6,000</i>	
	<i>Financial management disbursement and reporting</i>	<i>FM specialist</i> <i>Operations officer</i>		
	<i>Task Leadership</i>	<i>TTL</i>	<i>\$6,000</i>	
<i>Other</i>				

#### *Skills Mix Required*

<b>Skills Needed</b>	<b>Number of Staff Weeks</b>	<b>Number of Trips</b>	<b>Comments</b>
<i>Insurance Specialist</i>	<i>4</i>	<i>Field trips as required.</i>	
<i>Task Team Leader</i>	<i>4</i>	<i>Minimum two field trips</i>	
<i>Legal Counsel</i>	<i>3</i>	<i>Field trip as required</i>	
<i>Fiscal specialist</i>	<i>3</i>	<i>Field trip as required</i>	
<i>Operations officer</i>	<i>2</i>	<i>Field trips as required.</i>	

## **ANNEX 5: URUGUAY'S ENERGY STABILIZATION FUND**

### **I. URUGUAY's FISCAL FRAMEWORK**

46. In order to conduct a transparent, predictable and sustainable fiscal policy to set the stage for private sector investment and economic growth, it is key to put in place a well-defined fiscal framework. Fiscal responsibility laws, fiscal rules, escape clauses, and a medium-term framework constitute the main elements of a fiscal framework in this respect.

47. Uruguay's fiscal framework is structured in the form of a five-year budget which basically coincides with a presidential term. There are mechanisms to review the budget priorities and to adjust it for unforeseen circumstances within the framework given by the five-year budget.

48. Uruguay does not have a fiscal responsibility law and fiscal rules in place other than an indicative quantitative rule on the debt regarding the debt to GDP ratio. The public sector budget for the 2010–15 period and the budget updates for 2011 and 2012 included an objective to reduce gross public debt to 40–45 percent of GDP by 2015. However, because Uruguay has contracted debt for precautionary reasons, which has resulted in both an increase in gross debt as well as in liquid assets, the authorities have shifted their focus from gross to net public debt over time setting the objective for public debt net of liquid assets to 30 percent of GDP by 2015. At end-2013, gross public debt stood at about 60 percent of GDP, while public debt net of liquid assets declining to 23 percent of GDP.

49. In Uruguay, fiscal policy focuses on the consolidated public sector (CPS)<sup>14</sup> instead of the general government, given the important role of state-owned enterprises and the fact that they do matter for aggregate demand and debt sustainability. Furthermore, many government decisions are implemented by state owned enterprises. Hence, the focus on the CPS accounts is in line with best practice.

50. At the same time, including all state-owned enterprise operations can blur Cyclical Adjustment Balance (CAB) estimates, especially when they are prone to be subject to shocks unrelated to the economic cycle. For instance, the financial position of the public company in charge of importing and distributing fuel oil (ANCAP) can change significantly because oil imports are lumpy, but with no effect on aggregate demand. Similarly, the operations of the state-owned electricity company (UTE) are affected by variations in rainfall. Droughts forces UTE to rely more on costly oil to produce electricity (i.e., the drought in 2008 and 2009 cost UTE approximately 1.4 percent of GDP on an annual basis). In a sense, given the objective to smooth electricity tariffs, UTE's financial position depends on "rain-cycles" rather than GDP cycles. There are probably other operations or developments in state-owned enterprises that neither depend on the GDP cycle nor should be seen as discretionary fiscal policy or that do not affect demand. For these reasons, in many countries, the CAB is estimated for the general government.

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<sup>14</sup>The CPS includes the Central Government-BPS, public enterprises (AFE, ANCAP, ANP ANTEL, ANV, OSE, and UTE), the Central Bank of Uruguay, the Insurance State Bank (BSE), and the Intendancies.

51. The CPS accounts are prepared on a cash basis, with the primary and global balances not adjusted for the effects of the economic cycle, or one-off operations, except for those effects of the weather cycle which result in contributions or uses to and from the Energy Stabilization Fund (FEE). However, the Minister of Economy and Finance's Annual Report (Informe Económico Financiero) presents estimates and projections for 2005 onwards for the primary and global balances adjusted for the economic and weather cycles and one-off operations, that is on a structural basis, and for the global balance adjusted by the inflation component of the interest rate, that is, the operational balance. These calculations seek to present more informed primary and global results, ones which reflect the underlying stance of fiscal policy and one which is adjusted to reflect the impact of the real interest rate on the public sector accounts.

## **II. RATIONALE FOR USING STABILIZATION FUNDS AND THE URUGUAY'S ENERGY STABILIZATION FUND**

52. Although a stabilization fund is used as a fiscal policy instrument, which if well-designed contributes to the implementation of a transparent, predictable and sustainable fiscal policy, it is not a necessary condition to adopt such a policy. Moreover, a stabilization fund cannot be used as a substitute for an adequate fiscal framework. However, if a decision is made to establish a stabilization fund it must be fully integrated into the fiscal framework by linking the rules of accumulation and use of the fund to the fiscal rules, with the revenues accumulated in the Fund and withdrawn from the Fund circulating through the fiscal budget.

53. Stabilization funds seek to help smooth public spending and contribute to short-term macroeconomic stability. Financial assets accrued during boom conditions can be mobilized to undertake acyclical or countercyclical fiscal policies in the contractionary phases of the economic cycle. The stabilization objective can also have a bearing in government financial investment decisions: assets in stabilization funds are typically held abroad to help macroeconomic management by insulating the domestic economy and the banking system from revenue volatility.

54. Moreover, having a stabilization fund has the advantage that in the event of a set in of an economic slowdown, when the access to capital markets tend to become more expensive, the country can use the assets accumulated in the Fund without having to go to these markets, which has a favorable effect on interest rates both for public and private sector borrowing, contributing to mitigate the effects of the cycle.

### **II.1 Main Elements of a Stabilization Fund**

#### **II.1.1 Operational Objectives**

55. While the broad policy objective of the fund is sufficient to motivate their set-up, it needs to be supplemented with an operational objective to insert the Fund in the fiscal framework, and to help derive an appropriate investment policy and asset allocation strategy. These include funding, withdrawals, and spending rules. The operational objectives should be clearly defined and consistent with the broad policy objective of the Fund.

## II.2 Rules of Accumulation and Use

56. The rules of accumulation and use determine the resources that will be deposited in the Fund and the conditions under which resources may be withdrawn, respectively. These rules should be linked either to the fiscal rule or to the economic cycle in the case of a stabilization fund, so that the stabilization fund operates promptly, predictably and transparently. In this respect, the rules of funding and withdrawal need to be defined in such a manner that the contribution to and the disbursements from the Fund are triggered automatically regarding the when and by how much of the contribution or disbursement, without a decision having to be made by the managers of the Fund or by the fiscal authorities.

57. There is a variety of Funds' deposit and withdrawal rules: (i) contingent rules that determine the amount of resources that should be deposited in the fund or that can be withdrawn from it depending on whether revenue or prices are higher or lower than given thresholds; (ii) Revenue-share rules are the ones that link deposits to a Fund to a fixed share of revenues, regardless of overall fiscal developments; and (iii) financing funds with net inflows into the Fund mirroring the overall budget balance.

## II.3 Uruguay's Energy Stabilization Fund (FEE)

### II.3.1 Objectives of the FEE

58. The FEE is a fiscal instrument being used to reduce the impact of the weather cycle on the conduct of fiscal policy and on the finances of UTE. The effects of the weather cycle on the stance of fiscal policy are ameliorated, making it less procyclical to weather events, by saving part of the improvement in UTE's global result by depositing it in the FEE when the weather cycle is favorable, and by using funds in the FEE so as not to have to cut investment and/or increase borrowing by the full impact of the shock when the climate cycle is adverse. In this manner, the FEE also contributes to stabilize electricity tariffs in the face of weather events.

### II.3.2 Legal and institutional framework of the FEE

59. Law 18.719 of December 2010 created the FEE within the CND (Corporación Nacional para el Desarrollo) as a sole-purpose fund "to reduce the negative impact of hydropower deficits on the financial situation of UTE and on the consolidated public sector accounts". Decree 442 of December 2011 established that the CND in its capacity as Trustor of the FEE is to enter into a management trust fund contract with CONAFIN AFISA (Corporación Nacional Financiera de Fondos de Inversión) to act as trustee, with UTE being the beneficiary. The trust fund contract has not been celebrated yet, and in the meantime the FEE funds are kept in a separate account of the CND.

### II.3.3 Maximum size of the FEE

60. Law 18.719 sets a maximum size for the FEE in terms of a number of Indexed Units which at present is the equivalent of about USD 480 million. Once the maximum amount of funds in

the FEE is reached the rules of contribution no longer apply. The original funding of the FEE amounted to USD 150 million.

#### II.3.4 Rules of contribution of the FEE and limit on the size of contributions

61. The rules of contribution to the FEE by UTE, established by Decree 442 and modified by Decree 305/014, result in the accumulation of funds in the FEE through two types of contributions: (i) a fixed contribution, paid annually in December, which applies when the actual annual hydroelectricity generated (GHRA) is greater than 65 percent and lower than 100 percent of the annual expected hydroelectricity to be generated (GHEA), with the contribution amounting to 6.5 percent of the Targeted Level of Fund Coverage (VOCF) when GHRA is > 65 percent but < or equal to 100 percent of GHEA, and 8.5 percent when GHRA is > than GHEA; and (ii) a variable contribution, calculated quarterly but paid annually in December, which applies when the quarterly GHRT is > than 115 percent the quarterly GHET. The annual variable contribution plus the cost of the delivered hydroelectric power valued according to Article 5 of Decree 442 may not exceed the expected cost of the energy projected by the model, which in practice sets an upper limit to the variable contribution.

62. When the FEE reaches the VOFCH as stipulated by Decree 305/014 the rules of contribution no longer apply.

#### II.3.5 Returns from the investment of the funds in the FEE

63. Returns from the investment of the funds in the FEE, with the investment directives established by Decree 442/011 and Decree 305/014, are capitalized and consequently, are considered another source of funds for the FEE.

#### II.3.6 Rules of use of the FEE

64. The rules of use of the funds in the FEE by UTE, established by Decree 442/011 and Decree 305/014, allow for withdrawals on a quarterly basis when the GHRT is < than the Lower Hydraulic Limit (LIHT) which is defined as 90 percent of the GHET, valued according to Article 3 of Decree 305/014. The actual use of funds is limited by the availability of funds in the FEE as the FEE does not have the capacity to borrow.

### **III. BEST PRACTICES FOR FISCAL REPORTING OF STABILIZATION FUNDS<sup>15</sup>**

65. Stabilization funds are commonly established out of fiscal balances, and/or receipts resulting from commodity exports and employ a set of investment strategies for their assets, which include investments in foreign financial assets. A stabilization fund can be a useful fiscal policy tool provided that it is well-integrated in a sound overall fiscal management framework. In particular, stabilization funds can facilitate short-term fiscal stabilization, while aiming for achieving long-

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<sup>15</sup> This Section summarizes best practices for the operation of stabilization funds as identified from the experience of Sovereign Funds around the world by organizations such as the International Monetary Fund (IMF), the World Bank and the International Working Group on SWFs (IWG).

term fiscal sustainability—for example, preparing for population aging or facilitating intergenerational transfers.

### III.1 Integration of a Stabilization Fund with the Fiscal Framework

66. A stabilization fund needs to be considered as a specific instrument that is part of the overall fiscal policy management framework. International experience shows that sovereign funds should not be conceived as the basis or the anchor for fiscal policy. The operational rules of a Fund (i.e., for accumulation and use of funds) should not be confused with the numerical fiscal rules, at least in the absence of binding borrowing constraints. Operational rules of sovereign funds should rather reflect or be adapted to any quantitative fiscal rules, complementing their application.

67. The Fund’s inflows and outflows need be integrated into the budget process, including reporting. This means that all inflows into the Fund and all outflows out of the Fund circulate through the budget, which is the instrument used to allocate resources according to the priorities of the government. The Fund does not have the capacity to spend directly.

68. This is best achieved by having a financing fund, whereby overall surpluses are transferred to the Fund and deficits are financed out of the Fund. This is the case also when the source of funding is indebtedness. The financial statements of the Fund should be included in budget documentation.

### III.2 Public sector accounts

#### III.2.1 Fiscal indicator

69. The operations of a stabilization fund should be recorded in the fiscal accounts in such a manner that they do not affect the fiscal indicator utilized to measure the stance of fiscal policy. This is the case because contributions to and use of assets from the Fund constitute transactions in financial assets, as defined by the International Monetary Fund’s Manual of Government Finance Statistics (GFSM), and not fiscal operations, and consequently do not affect the primary and global balances. To attain this result, operations in financial assets are registered below the line, and symmetrically, i.e., contributions and uses registered in the same manner with opposite signs. Contributions to the Fund would be recorded as a use of cash deposits and an accumulation of deposits in the Fund, with no effect on the financing and the global result. Uses of the resources in the Fund would be registered as an increase in cash deposits and a decrease in the deposits in the Fund, with no effect on the financing and global result.

#### III.2.2 Rules of contribution and use

70. Rules of contribution to and rules on the use from a stabilization fund should not affect the primary and global balances of a given fiscal operation, independently if the Fund is allowed to borrow or not; and if there is a maximum size established for the Fund or a maximum amount of borrowing permitted for the Fund.

71. To attain this result, operations with the Fund are registered below the line and symmetrically, with the stabilization fund being part of the Public Sector with its assets and liabilities being recorded in the Balance Sheet of the Public Sector.

#### **IV. THE ENERGY STABILIZATION FUND (FEE)**

##### **IV.1 Recording FEE operations and the fiscal indicator**

72. Contributions to and uses from the FEE are registered as above the line operations, i.e. as transactions in nonfinancial assets. Moreover, a contribution by UTE to the FEE circulates through the Central Government (CG) accounts, grossing up revenues and expenditures, while uses from the FEE are reflected only in UTE's accounts as they do not circulate through the CG accounts, with the transfer made directly from the FEE to UTE. The grossing up of the CG revenues and expenditures complicates the comparison of their behavior from year to year, while the non-symmetrical treatment of contributions and uses not only further complicates the analysis, but cannot be made symmetric by registering the operations with the FEE below the line.<sup>16</sup>

73. The rationale for registering the operations of the FEE above the line in the public sector accounts stems from the fact that in this way the CPS accounts show less volatility as this volatility results from weather-related events and not from the conduct of fiscal policy. By adjusting the global balance of the CPS for a transitory event, it would reflect the underlying structural stance of the fiscal policy in regards to the weather cycle.<sup>17</sup>

74. Contributions by UTE to the FEE triggered by the contribution rules are registered as a transfer from UTE to the CG, i.e. as expenditure (fiscal transaction above the line), deteriorating UTE's current primary balance (CPB). In turn, the transfer of funds by UTE to the CG is registered in the CG accounts as other revenues (fiscal transaction above the line), and the CG transfer to the FEE is registered as current expenditure (fiscal transaction above the line). As a result, the CG's CPB and global balance are not affected. However, as revenues and expenditures are grossed up by the amount of the transfer, the contribution affects the behavior of revenues and expenditures of the CG. In all, the current primary and global balances of the Consolidated Public Sector deteriorate when there is a contribution from UTE to the FEE.

75. In contrast, if the contribution would be registered below the line as a financial transaction, with contributions not circulating through the CG accounts, UTE's accounts would show a use of cash deposits and an accumulation of deposits in the FEE, with no net effect on the financing and on the global balance of UTE and of the CPS.

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<sup>16</sup> It is to be noted that the Annual Economic and Financial Report (EFR) nets out UTE transfers to the FEE from the central government revenues and expenditures when analyzing their performance.

<sup>17</sup> Because of the maximum (US\$ 500 million) and minimum (US\$ 0) limits imposed on the size of the FEE, the global result adjusted in this manner does not necessarily correct for the total impact of the weather cycle, with the larger the size of the cycle (upwards or downwards), the larger the part of the weather cycle impact which is not adjusted. In addition, part of the correction may stem from the price cycle of oil imports.

76. The use of funds in the FEE does not circulate through the CG accounts, being registered as revenue by UTE (fiscal transaction), improving the CPB and global balance of UTE, and the current primary and global balance of the CPS.

77. In contrast, if the use would be registered below the line as a financial transaction, UTE's accounts would show an increase of cash deposits, and a use of the funds in the FEE, which net out. As a result, the CPB and global balances of the CPS would not be affected by the use of funds from the FEE.

78. Circulating UTE's contributions to and uses from the FEE through the CG accounts requires an adjustment in UTE's and the CG's below the line operations, so that UTE's accounts show a use of cash deposits and transfer of funds to the CG when it contributes to the FEE and an accumulation of cash deposits and a transfer of funds from the CG when there is a use of the FEE. For the CG's accounts the adjustment would be with opposite sign. Consequently, is preferable that contributions and uses do not circulate through the CG's accounts even in the case when the operations with the FEE are registered below the line and in a symmetric form. This practice would be in line with the fact that it is UTE that makes the contributions and that it is the entity entitled to use the funds in the FEE, and will be the beneficiary of the Trust which will be created.

79. The non-symmetric registration of contributions and uses in the fiscal accounts, with contributions circulating through the CG accounts while uses do not, results in an additional element which impacts the behavior of the revenues and expenditures of the CG. Moreover, this non-symmetric impact cannot be corrected by registering contributions and uses below the line, because for contributions the accumulation of funds in the FEE would be registered in the CG accounts while the use of funds in the FEE would be registered in UTE's accounts. Consequently, either both contributions and uses circulate through the CG accounts or neither does. However, as discussed in paragraph 40 above, and for the sake of simplicity in the registration of the operations, it is preferable that neither contributions nor uses circulate through the CG accounts.

80. Presently, the FEE is not part of the assets of the Central Government or of UTE, being registered as a separate account in the CND, which is not part of the CPS. Thus, the assets accumulated and used by UTE are registered as expenditure and revenues as fiscal transactions and not as financial transactions.

## **V. FURTHER IMPROVEMENTS**

81. To further strengthen the functioning and recording of FEE transactions, the following suggestions were presented:

- i. Operations of the FEE could be recorder below the line in the consolidated public sector accounts.
- ii. Contributions by UTE to the FEE could go directly to the FEE without circulating through the CG's accounts.

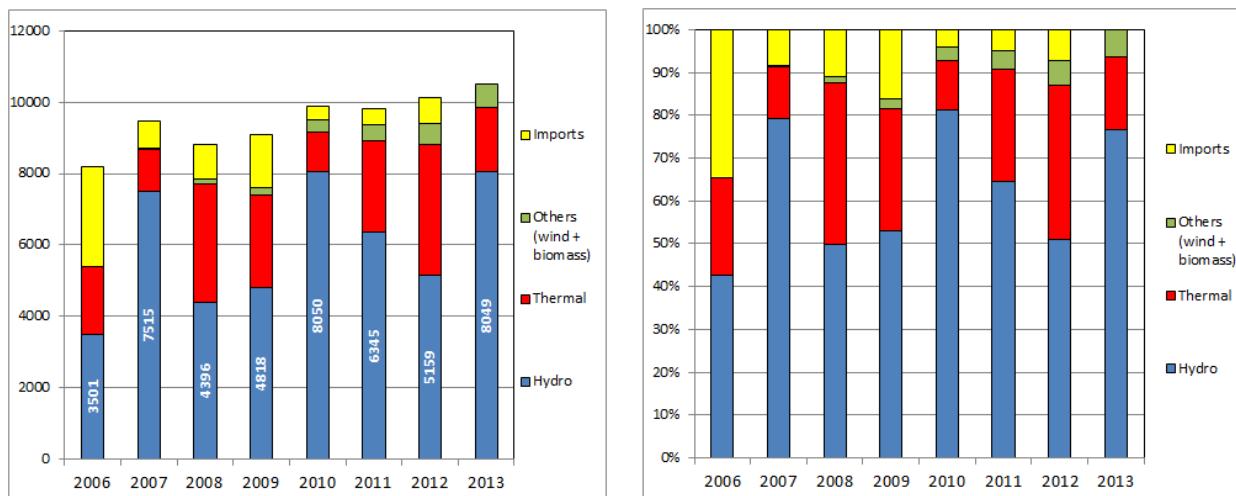
- iii. Contributions to and uses of the FEE could be recorded below the line and in a symmetric manner for fiscal accounting purposes.
- iv. FEE's total borrowing could be registered in the FEE's balance sheet, independently whether the funds remain in the FEE or are transferred to UTE.
- v. Fiscal accounting could incorporate the concepts of current primary balance and overall balance adjusted by the operations with the FEE in the public enterprises accounts as well as for the CPS accounts.
- vi. The FEE could be included as an extra budgetary in the public sector accounts as well as in the public sector balance sheet.
- vii. FEE's borrowing could be included in the gross public sector debt.
- viii. FEE's assets could be included as liquid assets when calculating the net debt indicative target.

## ANNEX 6: URUGUAY'S ELECTRICITY SECTOR

### I. Electricity supply

82. The Uruguay electricity sector is characterized by a high reliance on hydropower. In the last 8 years (see Figure 1) hydropower represented between 43 to 81 percent of the electricity mix, depending on water availability. Supply has historically been complemented by thermal electricity and imports as needed. Non-conventional renewable sources (biomass and wind) have been improving their participation. The country has no proven reserves of oil, natural gas, or coal and has reached its hydroelectric potential which represent close to 75 percent of the electricity mix, and the country has reached its hydroelectric potential from large power-plants.

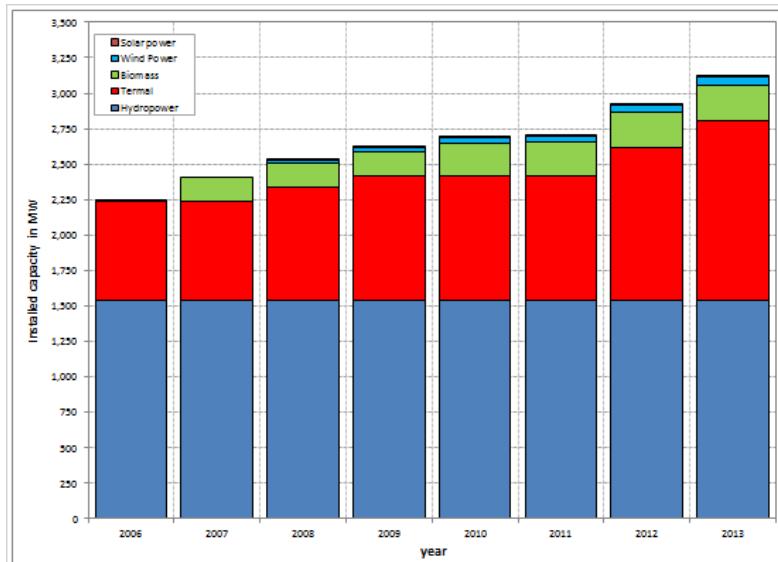
**Figure A6.1: Electricity supply in GWh and percentage, by source**



Source: Own elaboration with UTE's data

83. As for the installed capacity, thermal, biomass and wind had gained participation in the last years as indicated in Figure 2, but hydro and thermal are still the main technologies.

**Figure A6.2: Installed capacity by technology in 2013**



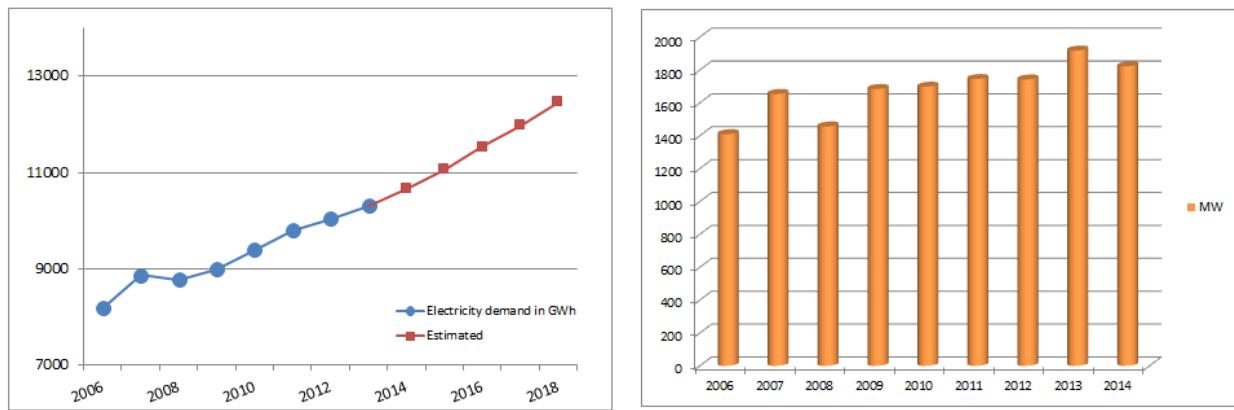
Source: MIEM

## II. Electricity demand

84. Uruguay has almost universal electricity coverage, with 98 percent of the population having access to the national electricity grid (SIN).

85. Rapid and sustained growth has also resulted in increased energy demand. Between 2006 and 2013 electricity demand raised 26 percent and peak demand also increased near 30 percent in the same period as indicated in figure 3 below.

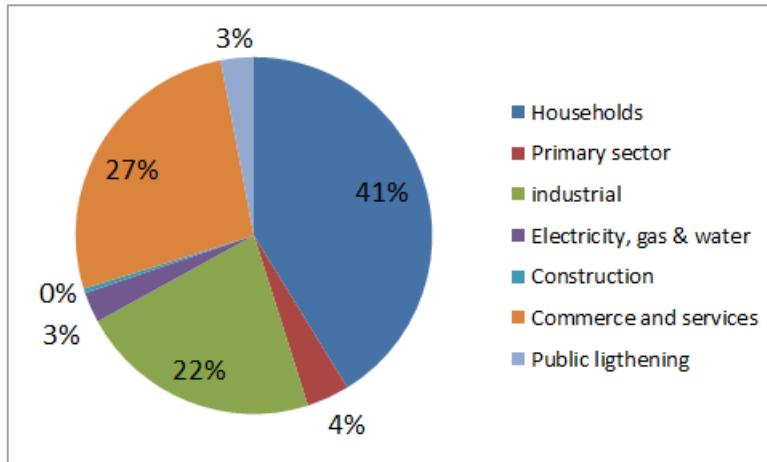
**Figure A6.3: Evolution of electricity demand in GWh and evolution of peak demand in MW**



Source: Own elaboration with UTE's data

86. As to sector composition, the residential sector accounts for 88 percent of the 1.2 million customers, and 40 percent of the electricity consumption as indicated in the Figure 4 below.

**Figure A6.4. Electricity demand by sector, in 2012.**



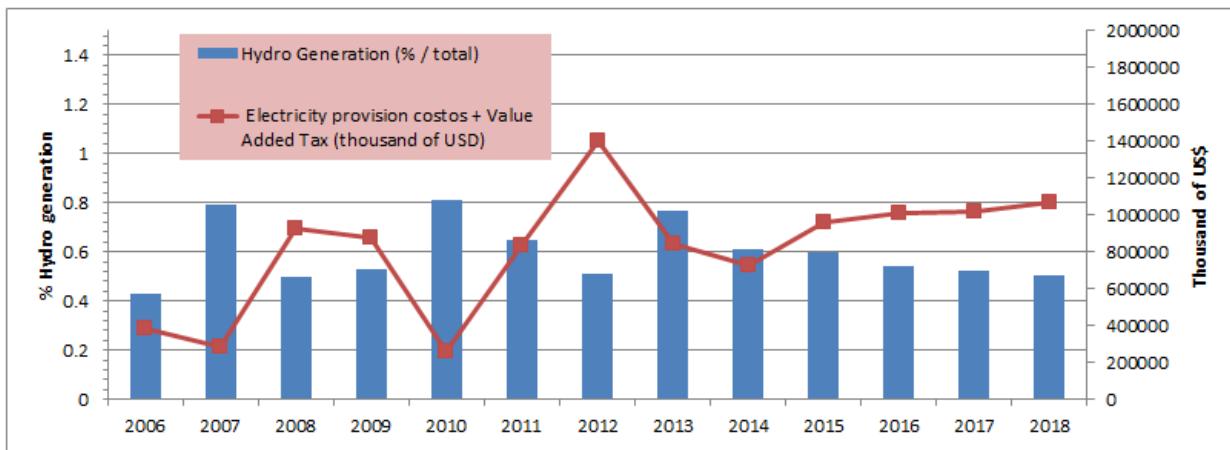
Source: Own elaboration with MIEM data.

87. On the social side, 97 percent of poor households have access to the SIN and the richest quintile consumes only about 30 percent more than the poorest quintile. The poorest decile spends about 5.23 percent of their monthly household income on electricity, compared to 3 percent in the case of the richest decile, with the richest decile spending 3.6 times what the poorest decile spends on electricity (ENGIH 2005-2006). The weighted average tariff is 12.27 cents per kWh, among the highest in Latin America.

### III. Electricity costs

88. The cost of supplying electricity is directly related with the hydrology of the river basins that connect to the hydroelectric system. In rainy years, the share of hydroelectricity is higher and therefore the cost is lower. In dry years, the lack of water used to be compensated with thermal generation and electricity imports.

**Figure A6.5: Evolution of Electricity Provision Costs (CAD) and of hydroelectricity in the period 2006 – 2018**



Source: UTE

89. In the past years, the average cost of producing electricity has increased up to 75US\$/MWh between a rainy (2007) and dry year (2008) due to the change in the electricity mix. In recent years, the cost of imported electricity in dry years has been very high (with imports from Argentina reaching an average price of 425US\$/MWh in 2009 for example). In addition the cost of producing electricity through thermal generation has also increased as Brent prices have increased markedly during the latest commodity price boom. In 2012, a very dry year, the cost of providing electricity was 63 percent higher than in 2011 and 2011 was 223 percent higher than 2010, a very wet year.

**Table 1: Electricity provision costs (at generation stage)**

Thousands of US\$	2006	2007	2008	2009	2010	2011	2012	2013
Fuel	192,456	163,786	694,286	452,150	145,888	621,767	1,014,797	544,619
Hydro energy from Salto (CTM)	19,185	51,867	12,927		121,787	48,717	21,212	79,944
Contracts *	174,956	69,391	220,309	427,659	(7,422)	163,240	369,008	165,672
Climate Assurance								50,300
<b>Total</b>	<b>386,597</b>	<b>285,044</b>	<b>927,522</b>	<b>879,809</b>	<b>260,253</b>	<b>833,724</b>	<b>1,405,017</b>	<b>840,535</b>
GWh of electricity provided	8,211	9,491	8,807	9,088	9,905	9,824	10,138	10,515
Implicit MWh average cost, in US\$.	47.08	30.03	105.32	96.81	26.27	84.87	138.59	79.94

Source: UTE. \* Contracts refer to electricity imports, electricity bought to private generators (wind and biomass) and the O&M costs of thermal motors.

#### IV. Electricity tariffs

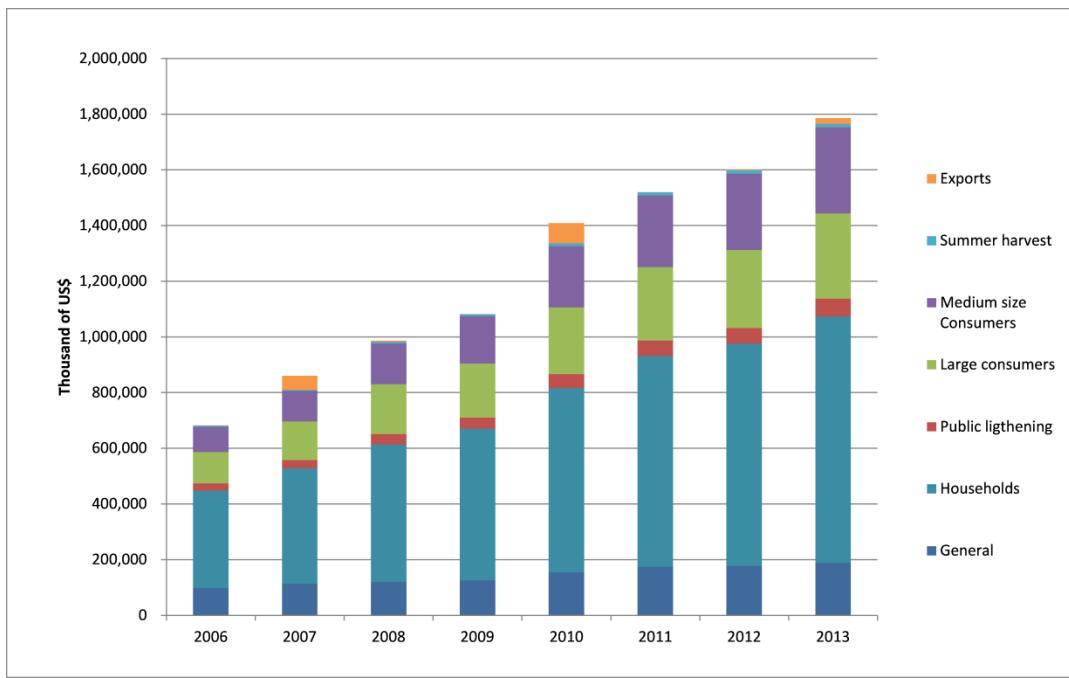
90. Electricity tariffs are calculated, assuming an average hydrological year, to cover the medium-term supply costs (investment, operation and maintenance) and ensure a return between 6 to 10 percent on assets. Tariff readjustments take into account the evolution of costs in relation with expected inflation, the price of Brent, the expected exchange rate vis-à-vis the USD, and salary increases. Tariffs are proposed by UTE, the regulator (the Energy and Water Services

Regulation Unit, URSEA) analyses the proposal and shares its assessment with the executive branch who determines the final tariffs.

91. This mechanism has an implicit policy of not transferring short run upstream costs fluctuations into tariffs so as to attenuate drought's impact to households and firms.

92. UTE works with 10 different tariffs categories, including tariffs schemes to promote energy efficiency in non-peak hours. Figure 6 below shows the participation of each category in UTE's energy sales.

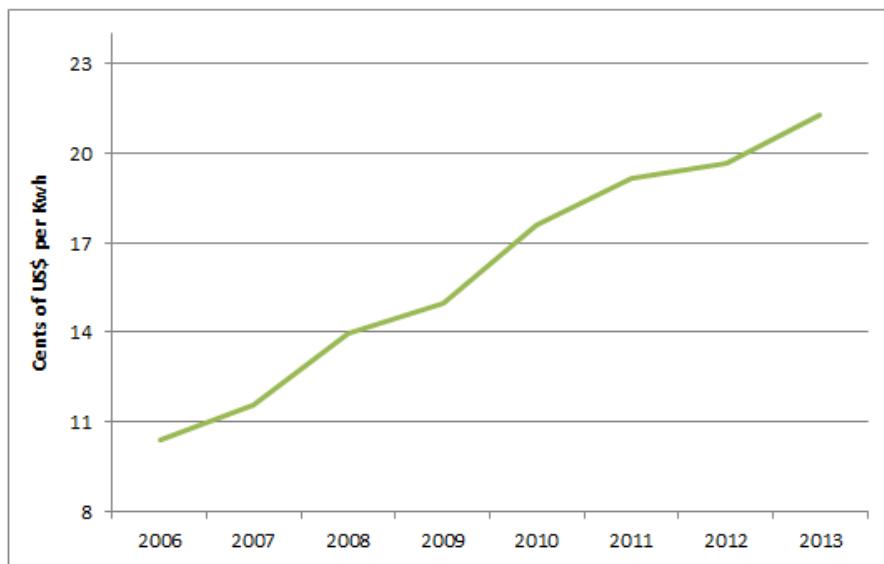
**Figure A6.6: Energy sales in thousands of US\$, per tariff category**



Source: UTE

93. As regards tariffs evolution, between 2006 and 2013 weighted average tariffs grew 105 percent. Figure 7 shows the behavior in the last years.

**Figure A6.7: Weighted average of electricity sale price (all tariffs categories) in cents of US\$ per KWh**



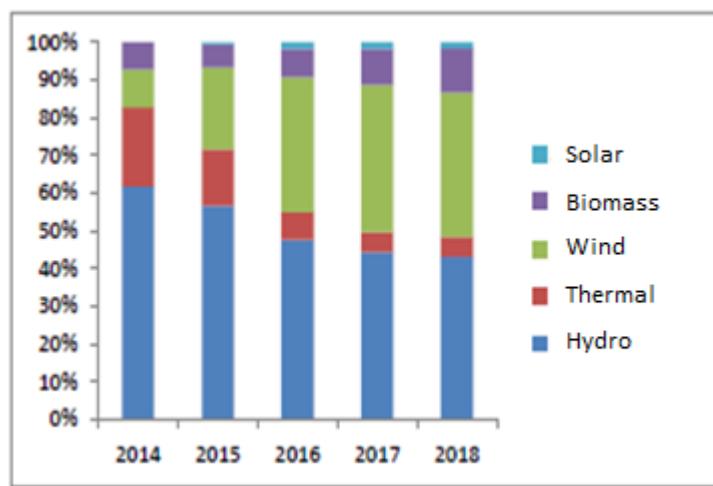
*Source:* Own elaboration with UTE's data.

## V. Matrix diversification process

94. In order to address the hydro vulnerability of the electricity sector and following Uruguay national long term energy policy, in the last years, the Government has been adopting policies to foster renewables and diversify the electricity matrix. The Government electricity strategy aims at increasing the contribution of other renewable sources, improving efficiency and reducing the costs of alternative sources. In the next years, authorities expect to have a more balanced electricity matrix, with a lower weight of hydropower and less expensive, more efficient thermal generation plants.

95. The country has already made large investments in wind and in a regasification plant, while also supporting the implementation of energy efficiency programs. The government has developed and pursued major investment plans, with private sector investing significantly, especially in the wind energy. Wind energy installed capacity is expected to rise to near 1570 MW by early 2017 from around 53.2 MW in early 2014. The government has also pursued the installation of power plants based on biomass (forest and paper pulp plants residue). By 2018 biomass installed capacity will reach 204 MW.

**Figure A6.8: Foreseen participation of renewable energy in the electricity mix (Share of the electricity generated)**



Source: UTE

96. Wind investments are associated with multiple small and medium wind farms, developed by private and public sponsors as indicated in table 2 below.

**Table 2a: Wind farms under construction – Public sponsor**

Company	Wind Park	Department	Generation capacity availability (in MW) foreseen for				
			10/14	7/15	1/16	7/16	1/17
UTE - Electrobras	R. Mendoza Artilleros	Flores	32.5	32.5	32.5	32.5	32.5
UTE - Electrobras	R. Mendoza Artilleros	Flores		32.5	32.5	32.5	32.5
UTE	J.P. Terra	Artigas	33.6	33.6	33.6	33.6	33.6
UTE	J.P. Terra	Artigas		33.6	33.6	33.6	33.6
UTE	Andresito	Flores		25	25	25	25
UTE	Andresito	Flores			25	25	25
UTE	Pampa	Tacuarembó			70	70	70
UTE	Pampa	Tacuarembó				70	70
UTE	Valentines	Treinta y tres			35	35	35
UTE	Valentines	Treinta y tres				35	35
UTE	Colonia Arias	Florida, Flores			35.5	35.5	35.5
UTE	Colonia Arias	Florida, Flores			35.5	35.5	35.5
UTE	Arerunguá	Rivera					50
UTE	Renting - Palomas	Salto			35	35	35
UTE	Renting - Palomas	Salto			35	35	35

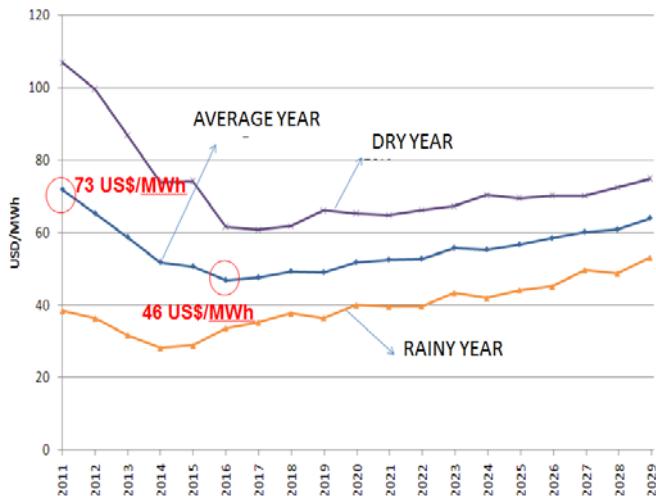
**Table 2b: Wind farms under construction – Private sponsors**

Company	Wind Park	Department	Generation capacity availability (in MW) foreseen for				
			10/14	7/15	1/16	7/16	1/17
Fingano S.A.	Carapé	Maldonado		50	50	50	50
C.G. Libertador I SA (Jistok S.A.)	Libertador I	Maldonado, Lavalleja				50	50
Palmatir S.A.		Tacuarembó	50	50	50	50	50
Luz de Río SA (Ensol S.A.)		Florida, Flores	50	50	50	50	50
Generación Eólica Minas			42	42	42	42	42
Aguas Leguas S.A.	Peralta I	Tacuarembó		50	50	50	50
Aguas Leguas S.A.	Peralta II	Tacuarembó		50	50	50	50
Polesine S.A.	Florida I	Florida	50	50	50	50	50
Estrellada S.A.	Melowind	Cerro Largo					50
Molino de Rosas S.A.	Molino de Rosas 50 MW	Maldonado			50	50	50
Cen. De Gen. E. Artigas (Noukar)	Libertador IV	Lavalleja				50	50
Astidey	Talas del Marciell I	Flores		50	50	50	50
R del Sur S.A.		Maldonado	50	50	50	50	50
Vientos de Pastorale S.A.	Vientos de Pastorale	Flores			49.2	49.2	49.2
Cobra Ing. Uy (Tulifox S.a.)	Kiyú (ex Tulifox)	San José		48.6	48.6	48.6	48.6
Vengano	Carapé II	Maldonado			40	40	40
Compañía Darinel INC. SA	Sierra de las ánimas	Maldonado				25	25
Compañía Darinel INC. SA	Sierra de las ánimas	Maldonado					25
Cadonal	Peralta II	Flores		50	50	50	50
Ladaner		Cerro Lago					50
Luz de Mar		Florida	18	18	18	18	18
Luz de Loma (Fortuny)	Pintado II	Florida	20	20	20	20	20
Impsa	Libertador II y III (Amplim 2 y 3)	Lavalleja		14	14	14	14
Togely Company (spot)		San José	3.9	3.9	3.9	3.9	3.9
<b>TOTAL Wind Capacity Additions into the system</b>			<b>350</b>	<b>753.7</b>	<b>1164</b>	<b>1394</b>	<b>1569</b>

Source: MIEM and UTE

97. Given the investments in renewable energy, the volatility in the cost of electricity production is expected to decline markedly, as shown in Figure 9 below. The difference in cost between a rainy and a dry year would drop from 75US\$ per MW/h in 2011 to an estimated 25US\$ per MW/h in 2017. Thus, the structural vulnerabilities of Uruguay's electricity system associated with the hydro dependence will start declining by 2015 when many wind farms should start production. In addition, the regasification plant under construction will also contribute to reduce the electricity cost by lowering the costs of the thermal energy.

**Figure A6.9: Foreseen electricity cost in thousands of US\$**



Source: MIEM

## VI. Regulatory framework for the electricity sector

98. Uruguay's electricity sector governance is considered sound. There is a clear separation of roles with:

- a) An independent regulatory body, the Energy and Water Services Regulation Unit (URSEA);
- b) A policy decision maker entity which also oversees service standards, the National Energy Directorate, part of the Ministry of Energy within the Ministry of Industry, Energy, and Mining (MIEM)
- c) A planning and system operation entity, the Electricity Market Administration (ADME).
- d) A major vertically integrated state-owned operator (UTE), responsible for 55.3 percent of the country's installed capacity, and other upstream operators including the Salto Grande binational hydroelectric plant (35.1 percent), and private firms (12.6 percent) that respond for the rest of the generation capacity.

99. **Electricity transmission and distribution are handled by UTE.** The state-owned ANCAP has the monopoly on importing and marketing hydrocarbons and petroleum products, except for gas; it is the main supplier of fuels to UTE. Trading on the wholesale electric market (MEM) is done through contracts. Spot market transactions are also allowed.

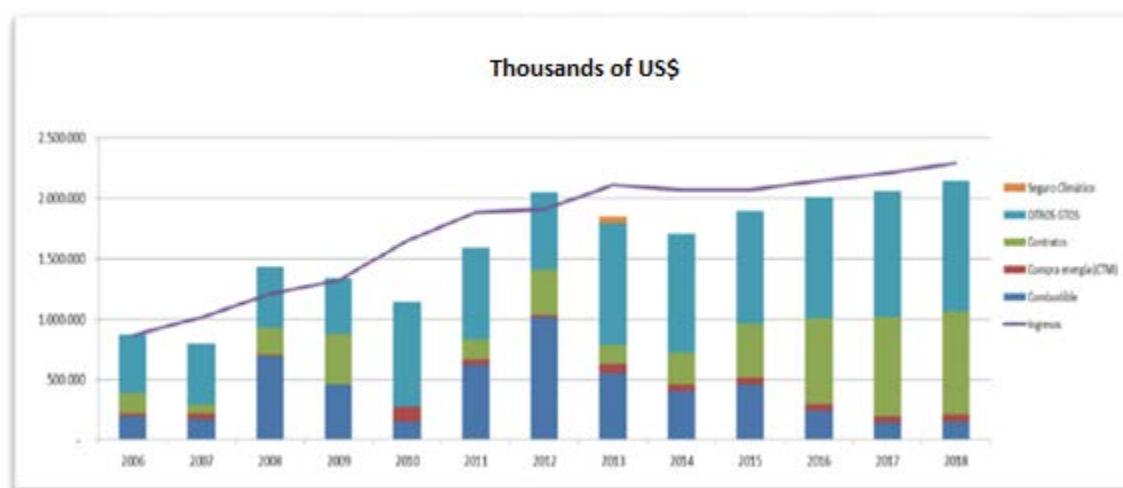
100. **Electricity tariffs are proposed by UTE to URSEA and approved by the executive branch.** They are calculated based on the basis of an average hydrological year, covering the medium-term supply costs (investment, operation and maintenance, a return between 6 to 10 percent on assets). Transfers from FEE to UTE have a stabilization purposes and provide a temporary mechanism to attenuate short run fluctuations in tariffs faced by households and firms.

## VII. UTE

101. **UTE is a state owned enterprise founded under the organic Law 15,031/80.** It is a legal entity created under domestic public law. Its annual budget is based on strategic planning and is approved by the executive branch of the government. Its budget is part of the consolidated public sector budget and its results impact public finances directly. UTE has a board of directors that includes a representative from opposition parties. UTE publishes on-line audited accounts annually.

102. UTE is a sound public company with average revenues capable of finance their costs as indicated in the figure below.

**Figure A6.10: Evolution of UTEs revenues and UTE's electricity provision costs at generation stage and other costs**



*Source:* UTE. \* Contracts refer to electricity imports, electricity bought to private generators (wind and biomass), the O&M costs of thermal motors and canon for Brazil interconnection.

103. Other indicator of UTE's financial soundness is the amount of money transferred to the Central Government.

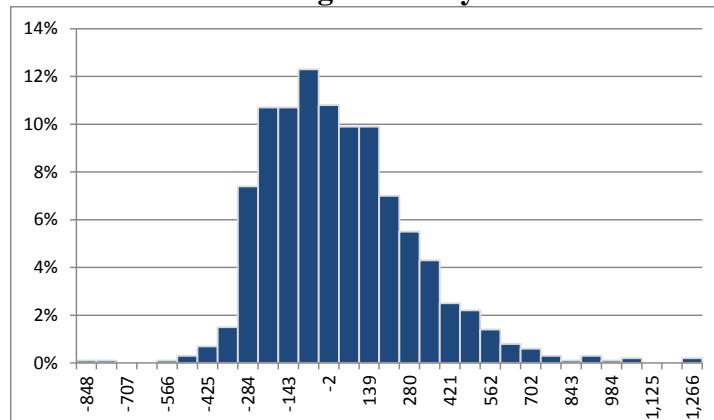
**ANNEX 7: ECONOMIC ANALYSIS - FINANCIAL RISK ASSESSMENT**  
**URUGUAY: Uruguay Drought Events' Impact Mitigating Investment Project Financing**

104. This Annex presents the methodology used to assess the financial risk that UTE faces due to an increase in its cost of meeting the electricity demand CAD (Costo de Abastecimiento de la Demanda). The variable of interest to be model is the “CAD deviation”,  $DCAD_t$ , which is defined as the difference between the observed CAD and its annual expected value:

$$DCAD_t^i = CAD_t^i - E(CAD_t)$$

where  $CAD_t^i$  is the CAD in year t<sup>18</sup> and in simulation i, and  $E(CAD_t)$  is the expected value for CAD for year t, calculated as the simple average of the simulated CADs for year t (Figure A1).

**Figure A7.1: Simulated distribution of the deviations of the cost of meeting electricity demand in 2015**



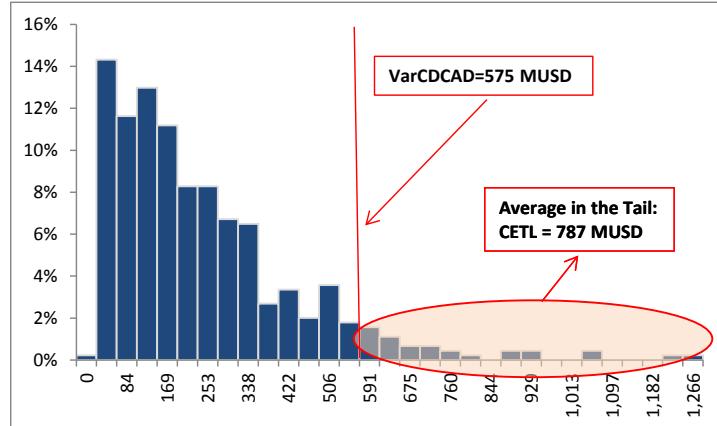
Source: World Bank staff calculations using the SimSEE model

105. For risk analysis purposes only “losses” (positive deviations) are relevant, therefore the conditional distribution of DCAD is used to assessing the risk of UTE (Figure A2)

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<sup>18</sup> It is incurred between the beginning of the year t and the beginning of the year t+1.

**Figure A7.2: Simulated Conditional Distribution of DCAD2015**



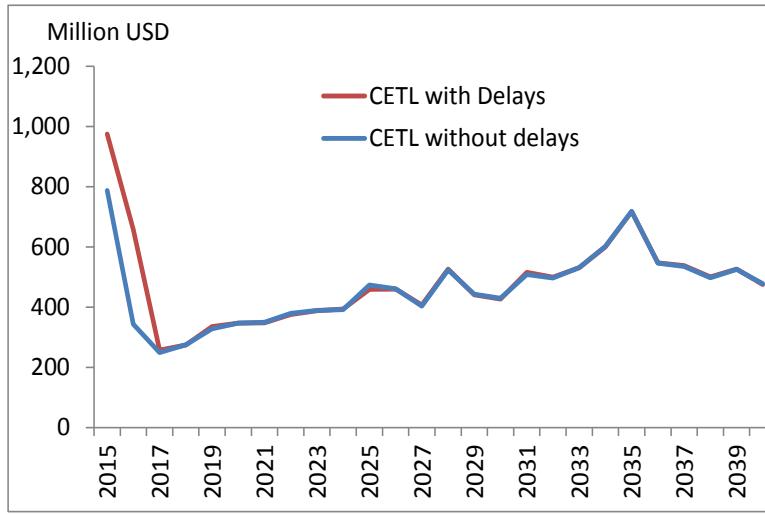
Source: World Bank staff calculations using the SimSee model

106. The risk metric chosen to measure the risk of UTE is the Conditional Expected Tail Loss (CETL), defined as the expected value of the Conditional CAD Deviation given that the DCAD is greater than the Conditional Value at Risk:

$$CETL_t = E(CDCAD_t | CDCAD_t > VaRCDCAD_t)$$

where  $CDCAD_t$  is the Conditional CAD Deviation in year  $t$ , and  $VaRCDCAD_t$  is the Value at Risk of the Conditional CAD Deviation, defined as the level of CDCAD that is exceed with a given probability. All results presented here are based on a probability of 5 percent.

**Figure A7.3 Methodology for the calculation of CETL in 2015**



Source: World Bank staff calculations using SimSee model

107. Following the same methodology, the CETL has been calculated for years 2015 to 2040. The evolution of CETL is shown in Figure A.3: the blue line shows the CETL under a scenario where all investments of UTE are finalized according to plan resulting in the expected change in energy matrix, while the red line exhibits the CETL assuming that there are some delays in projects (as described in Box A.1). It is worth noticing the marked reduction in risk in 2016 if there is no major delays in the change of the energy matrix (blue line), and that this risk reduction in risk is delayed until 2017 if the projects are not finalized as expected.

**Box 1: Description of modeled scenarios of electricity matrix generation**

Date	Available MWh from date	
	without delays	with delays
May-2015	640	540
Nov-2015	1,400	640
Jan-2016		1,020
Nov-2016		1,400

108. Wind generated electricity: Under the optimistic scenario, the expected number of MWh available by May 2015 is 640 and 1,400 by November 2015. The delays introduced in the second scenario are between 6 months and one year. The patterns used under the two scenarios are as follows:

109. Thermal electricity: Under the realistic scenario, the project using natural gas to generate electricity is delayed by one year (from July 2016 to July 2017) and, therefore, the exclusion of the Basic Heat Generator GO\_PTI (Punta del Tigre Gas Oil) was also delayed one year.

110. Hydropower electricity: There are no differences between the scenarios used.

**Residual Risk with current Risk Coverage Strategy**

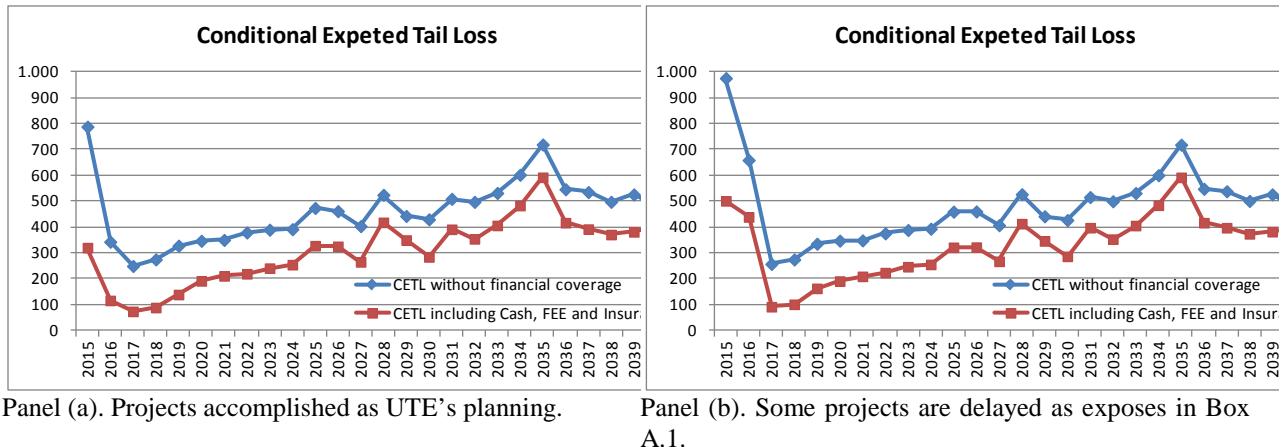
111. Currently, UTE uses three main instruments to cover its financial risk stemming from the CAD Deviation from its expectation: Cash Reserves, the Energy Stabilization Fund (FEE) and the Weather and Oil Price Insurance. The key assumptions used for assess the residual risk once these instruments are included in the financial risk management strategy are the following:

- a. Cash Reserve = 80 MUSD. If it is used in a given year, the amount necessary to return the balance to 80 MUSD is included in the budget of the next year, and consequently the full amount could be considered as available at the beginning of each year.
- b. Energy Stabilization Fund. The rules of contributions and withdrawals of the FEE are regulated by Decree 442/011. The formulae of the dynamic are exposed in the actuarial Technical Note. It is assumed that at the beginning of 2015, the balance of the FEE is 350 MUSD.
- c. Weather-Oil Price Insurance. UTE purchased a weather insurance to cover the risk of high oil prices and insufficient rainfall, which ultimately would result in a reduction in the Hydroelectric Generation. The parametric insurance is based on the Uruguay Potential Hydropower Energy Index (UPHEI), estimated as the potential generation of energy (GWh) in

the system during each Semester and it is calculated as a function of water inflow at three major hydropower plants in Uruguay. This insurance expires in June 2015, and for the purposes of modeling, it is assumed that it is not renewed.

112. Figure A.4 compares the financial risk as measured by CETL with and without the current financial risk management instruments (Cash, FEE and Insurance). Panel (a) shows the case under the planning of UTE and Panel (b) assumes delays in some of the projects.

**Figure A7.4: Expected Conditional Tail Loss using current instruments**



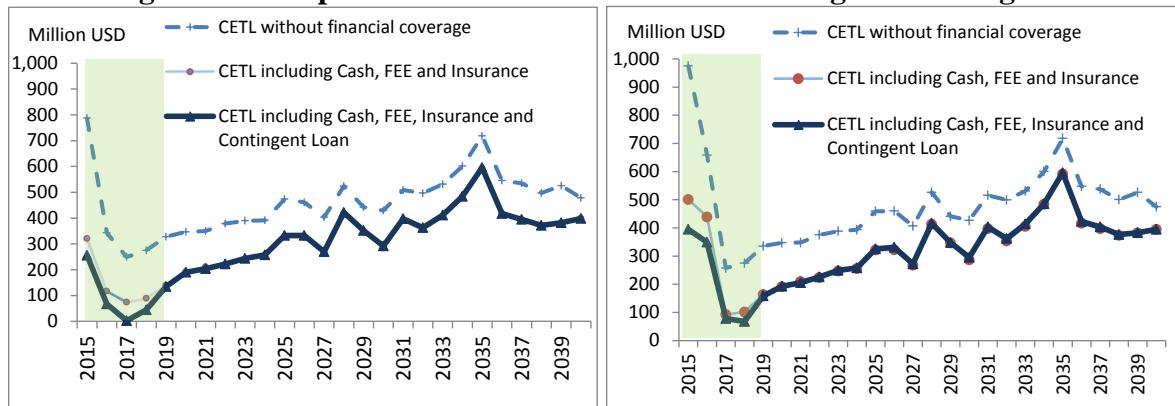
#### Residual Risk with current Risk Coverage Strategy and the Contingent Loan

113. In case that the Contingent Loan is in force from January 2015, this instrument should be added to the current financial risk management strategy.

114. The main assumption on the loan characteristics are:

- Amount: US\$150m
- Trigger: When FEE's balance is less than US\$50m
- Grace period: 6 years
- Amortization period: 20 years (annuity after grace period)
- Interest rate: 3.8 percent
- Front-end fee: one-time 0.25 percent on the amount of the loan
- Commitment fee: 0.5 percent yearly spread in 2 payments
- It is further assumed that the loan will form part of the FEE's maximum limit, i.e. the cash flows of the Contingent Loan will be included inside the FEE.

**Figure A7.5 Expected Conditional Tail Loss including the Contingent Loan**



Panel (a). Projects accomplished as UTE's planning.

Panel (b). Some projects are delayed as exposes in Box A.1.

*Note:* The shaded area represents the implementation period of the proposed operation.

Please note that the CETL estimations are preliminary.

115. The proposed instrument is adding value by reducing the financial risk of UTE. The decrease in risk is observed only in the first few years, because the contingent loan is available only for three years, and after that period the pattern of risk transferring is similar to the one with the current financial risk management strategy.

#### Probability of use of the contingent loan

116. For the period of time for which the contingent loan will be available (2015-2017) the associated disbursement probabilities are as follows:

Year	Change in electricity matrix generation as planned	Delays in planned change of electricity matrix generation
2015	7%	10%
2016	14%	21%
2017	19%	25%

#### Model/Software SimSEE

117. The dynamic financial analysis performed uses outputs from the model/software SimSEE; the model has the capability to optimize the cost of Uruguayan electricity production based on a complete definition of the electricity matrix generation. The model is also able to produce time series Monte Carlo simulations on many variables, but this analysis was made using the following ones:

- a. CAD\_anual: Yearly Total demand cost
- b. UPHEI\_SEM: Semester Uruguay Potential Hydropower Energy Index
- c. Brent: Brent Index
- d. GHR\_Anual: Annual Observed Hydroelectrical Generation
- e. GHR\_Trim: Quarterly Annual Observed Hydroelectrical Generation

- f. Cost\_GestioL: Annual cost of manageable electricity sources
- g. Energia\_GestioL: Annual manageable electricity produced

118. The SimSEE was developed by the “Universidad de la República Oriental del Uruguay”; SimSEE is open software available at [www.http://iie.fing.edu.uy/simsee/](http://iie.fing.edu.uy/simsee/).