



DOST Form 3

NON-R&D PROJECT PROPOSAL

(Technology Transfer, S&T Promotion and Linkages, Policy Advocacy, Provision of S&T Services, Human Resource Development and Capacity-Building)

I. PROJECT PROFILE

(1) Program Title: Community Empowerment through Science and Technology (CEST) Project Title: Solar-powered Domestic Water Generation Facility with Distribution System for Indigenous People of San Jose				
(2) Project Leader/Sex: Hon. Egdon T. Sombilon/Male Agency (smallest unit): LGU-San Jose Address/Telephone/Fax/Email (Barangay, Municipality, District, Province, Region): Brgy. Poblacion, San Jose, Romblon/ sanjoseromblonlgu@gmail.com				
(3) Cooperating Agency/ies (Name/s and Address/es): LGU-San Jose				
(4) Implementing Agency (Municipality / District / Province / Region) Base Station: Brgy. Pinamihagan, San Jose, Romblon Other Implementation Site (s): None				
(5) Project Duration (number of months): 12 months implementation, 24 months monitoring Project Start Date: February 2023 Project End Date: February 2024				
(6) Total Project Cost: <u>PhP2,323,572.86</u> (indicate Counterpart Funds; use Form 4 for the Line-Item Budget)				
Implementing Agency/ies	PS	MOOE	EO	Total
A. Requested Fund				
GIA		PhP 273,572.86	PhP2,050,000.00	PhP 2,323,572.86
B. Counterpart Fund 1				
LGU-San Jose		PhP 555,000.00	PhP 542,500.00	PhP 1,097,500.00
TOTAL		PhP 828,572.86	PhP2,592,500.00	PhP 3,421,072.86

II. PROJECT SUMMARY**(7) Executive Summary** (not to exceed 200 words)

As part of the smarter community program of the DOST-MIMAROPA, this project would try to address the water poverty in the IP community in Brgy. Pinamihagan, San Jose through adoption of solar energy technology in generating and distributing domestic water. Water will be generated by a solar-powered water pumping system and will be circulated directly to households through a distribution system. The solar-powered water pumping system and the primary pipes of the distribution system will be DOST-MIMAROPA's counterpart. These primary pipes would already eliminate the long-distance walk of the IPs as these primary pipes would be strategically located near the IP community to make the project stand-alone. The secondary pipes going to each IP household on the other hand will be LGU-San Jose's counterpart. Meanwhile, this project would complement DOST-MIMAROPA's project in 2022 also intended for IPs in Brgy. Pinamihagan which is the establishment of a corn and cassava common service facility. This is because, after this project is realized, the time spent by IPs in fetching water will be used in more productive activities such as processing their corn and cassava produce in the common service facility to earn additional income.

(8) Introduction (Not to exceed 15 pages)**Rationale/Significance** (Not to exceed 300 words)

San Jose is an island municipality in Romblon. Despite the surge in its tourism sector, a significant portion of its population made up of Ati natives and migrants from Panay remain marginalized. The IP community in this barangay is composed of 15 households. Each household has 8-15 members totaling an average of 225 IPs. These tribal communities are disconnected from the mainland with mountainous terrain making it more difficult for them to access necessary resources like food stocks, water, power, and even education. Among its old customs that enable them to survive the grips of hunger is small-scale agriculture. In 2022, a common processing facility for cassava and corn was established to increase the community's productivity and to provide them with entrepreneurial activity as an additional source of income. Water poverty on the other hand remains to be a major source of burden to the IP community. These indigenous people (IP) travel by foot to gather domestic water from the nearest source which is hundreds of meters away from their community. However, travel to the source is not a burden to the IPs. The difficult part is when they travel back to their community while carrying the added weight of water containers. Some households with extra money resort to hiring motorcycles to convey their water. These

motorcycles charge them PhP20.00 per gallon. After the motorcycles, on the other hand, the IPs still need to travel a few meters by foot to their houses which are in the mountainous part of the community.

Objectives (General and Specific)

The general objective of the project is to adopt solar energy technology in generating and distributing domestic water to ensure its stable source among the IP community in Brgy. Pinamihagan, San Jose, Romblon.

Specifically, it seeks to:

1. Establish a solar-powered water pumping facility to generate domestic water for the IP community in Brgy. Pinamihagan, San Jose
2. Complement the solar-powered water pumping system with a distribution system by providing the primary pipes of the system
3. Tap the LGU-San Jose to provide counterparts, especially for the secondary pipes of the distribution system and the workforce to construct the facility
4. Improve the productivity and enhance the well-being of the IPs in the area

Methodology

Once the project has been approved and funding has been allocated, the Regional Office, with the help of the PSTC, would facilitate the purchase of the proposed facility. The baseline data would then be established through a meeting with the IP community, the bLGU of Pinamihagan, and the LGU-San Jose. The solar-powered water pumping system and the primary pipes of the distribution system will be DOST-MIMAROPA's counterpart. Meanwhile, the LGU-San Jose will be tapped to provide counterparts for the housing of the facility and for the secondary pipes going to each household in the IP community. When the facility is complete, training on its operation and maintenance would be provided to the operators. The operators will be assigned by the bLGU-Pinamihagan. Also, a microbial and chemical analysis of deep well water will also be conducted before distributing the water to the IP community. This is to guide project stakeholders in decision-making and future planning about the project. Since the facility is solar-powered, there is no need to allocate energy expenses to operate the facility. However, the bLGU-Pinamihagan would be encouraged to allocate funds for the replacement of batteries and inverters when they reach their maximum service life. This will be a minimum amount though because batteries and inverters have at least 5 years' of service life. Moreover, since the beneficiaries will have time freedom from having a direct domestic water supply, conduct of relevant training activities will be targeted to improve the productivity of the IP-beneficiaries to maximize their available time. Monitoring of the interventions including the corn and cassava facility will be charged against the budget of this project. A staff from the Romblon Provincial Science and Technology Office would also be hired to focus on this project and to manage the overall aspects of the project.

Expected Outputs (6Ps):

Publication	None
Patent/Intellectual Property	None
Product	None
People Service	bLGU-Pinamihagan Staff, Indigenous People (IP)
Place and Partnership	LGU-San Jose, bLGU-Pinamihagan
Policy	None

Potential Outcomes:

1. Served at least 225 IPs in Brgy. Pinamihagan through the solar-powered water pumping facility with distribution system to generate domestic water
2. Conducted at least 1 training for the community
3. Secured at least PhP500,000 counterpart from the LGU-San Jose to complement the project

Potential Impacts (2Is):

Social Impact

1. Provided stable source of domestic water to the IP community
2. Improve the productivity and well-being of the IP community

Economic impact

1. The time saved from travelling to gather water can now be spent to more economic activity of the IPs



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REPORT CODE

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Discussion on the results of related project handled by the same proponent (if any):

Some of the related projects handled by the proponent are the establishment of water systems in Sitio Sugod and Sitio Proper of Brgy. Pinamihagan. The projects were completed successfully and are still operational to date. Residents near the water systems fully benefit from the projects and are fully cooperative with the proponent in sustaining the projects.

Target Beneficiaries:

The target beneficiaries of the project are the IP community located in the mountainous part of Brgy. Pinamihagan. Although there are only 15 households in the area, each household has 8-15 members resulting to roughly 225 IPs.

Sustainability Plan (if applicable):

Project sustainability would be ensured as the facility is solar-powered and requires fewer operating costs. The project manager assigned in San Jose would also oversee the overall aspect of the project to ensure deliverables by stakeholders are met. The DOST-MIMAROPA through its Romblon Provincial Science and Technology Office (PSTO), LGU-San Jose, and bLGU-Pinamihagan would work hand in hand to maximize and sustain the project. IP-beneficiaries are also highly expected to sustain the importance of the project would be done in view of their nomadic characteristics. Before the proposed source which is hundreds of meters (590m) away from their community. Carrying the added weight of water containers when they travel back to their households becomes a burden for them. Some households with extra money resort to hiring motorcycles to convey their water. These motorcycles charge them PhP20.00 per gallon. After the motorcycles, on the other hand, the IPs still need to travel a few meters by foot to their houses which are in the mountainous part of the community. Most IPs on the other hand could not afford to pay for motorcycle services, hence their toil to fetch water for their everyday needs. Once this project was realized, the time spent by IPs in fetching water would be used for other more productive activities such as cultivation of agricultural commodities (corn/cassava) for their food. They could also spend more time processing these commodities in the Common Service Facility, also one of DOST's interventions, to give them an opportunity to sell their products and make additional income.

Gender and Development (GAD) Score (refer to the attached GAD checklist):

Risk analysis (refer to the attached risks and assumptions):

(9) Workplan (See Form 5)

(10) Project Management (not to exceed one page)

The project would be carried out by the IP community under close supervision of LGU-San Jose, bLGU-Pinamihagan, and DOST PSTO Romblon. For the establishment of facility and other aspects of project implementation, the PSTO would work with the regional office and LGU-San Jose. DOST would also provide training on facility operation and maintenance to the assigned operator/s. Other interventions that would be identified would also be provided to ensure project sustainability and success.

III. OTHER SUPPORTING DOCUMENTS REQUIRED (Please refer to page 2 for the additional necessary documents.)

Prepared by:

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Mayor
LGU-San Jose, Romblon

Endorsed by:

MARCELINA V. SERVANEZ
Provincial S&T Director
DOST Provincial Office Romblon

Approved by:

DR. MA. JOSEFINA P. ABILAY
Regional Director
DOST-MIMAROPA

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Romblon

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DOCUMENT CODE

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DOST Form A

DEPARTMENT OF SCIENCE AND TECHNOLOGY

Project Line-Item Budget

CY 2023

Program Title	: Community Empowerment through Science and Technology (CEST)
Project Title	: Solar-powered Domestic Water Generation Facility with Distribution System for Indigenous People of San Jose
Implementing Agency	: DOST-MIMAROPA
Total Duration	: 1 year for project implementation / 2 years for monitoring of outcomes
Current Duration	: 1 year
Cooperating Agency	: LGU-San Jose
Program Leader	: Dr. Ma. Josefina P. Abilay/DOST-MIMAROPA
Project Leader	: Hon. Egdon T. Sombilon/LGU-San Jose
Monitoring Agency	: DOST-MIMAROPA PSTO-Romblon

		Counterpart Funding
	DOST-MIMAROPA	LGU-San Jose
I. Personal Services	P	P
Sub-total for PS	P	P
II. Maintenance and Other Operating Expenses		
Traveling Expenses - local	44,772.86	
Training Expenses		
Traveling Expenses - local (3RPsx2200/dayx3days+12,000boat fair for 3 (b&f))	31,800.00	
Supplies and Materials Expenses	20,000.00	
Other Professional Services (3 RPs x 1400/day x 3days)	12,600.00	
Printing and Publication Expenses (training tarp, 6.6 ft (W) x 3.75 ft (H))	200.00	
Representation expenses (15 pax x 330/day x 3 days)	14,850.00	
Rents-Motor Vehicles	18,000.00	
Supplies and Materials		
Office supplies	37,000.00	
Semi-Expendable-Equipment Expenses	10,000.00	65,000.00
Fuel, Oil and Lubricants Expenses	5,000.00	
Other Supplies and Materials Expenses		
Secondary pipes and water lines		400,000.00
Other Professional Services		90,000.00
Taxes, Insurance Premiums and Other Fees		
Insurance Expenses	14,350.00	
Representation Expenses (year-end review)	20,000.00	
Rent/Lease Expenses	45,000.00	
Sub-Total for MOOE	P	P
	273,572.86	555,000.00
III. Equipment Outlay		
SES Technology for Domestic Water Generation with Distribution System <i>(please refer to attached program of works for detailed specification)</i>	2,050,000.00	542,500.00
Sub-Total for EO	P	P
GRAND TOTAL	P	P
	2,323,572.86	1,097,500.00

Certified Funds Available:

ICYL T. GABINETE

Accountant, LGU-San Jose

Approved by:

Digitally signed

McMahay by Abilay
Digitally S
Josefina
DR. MA. JOSEFINA F. ABILAY
Regional Director, GOST NUMBER
Pimentel

XAVIER MAC DANIEL ORTIZ

Accountant III, DOST-MIMAROPA



DOST Form 5
A - PROJECT WORKPLAN

- (1) Program Title: Community Empowerment through Science and Technology
(2) Project Title: Solar-powered Domestic Water Generation Facility with Distribution System for Indigenous People of San Jose
(3) Project Duration (number of months): 12 months implementation & 24 months monitoring (4) Project Start Date: February 2023 (5) Project End Date: February 2024

(6) OBJECTIVES	(7) TARGET ACTIVITIES (quantify, if possible)	(8) TARGET ACCOMPLISHMENTS (quantify, if possible)	Y1				Y2				Total
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1. Establish a solar-powered water pumping facility to generate domestic water for the IP community in Brgy. Pinamihagan, San Jose	Procurement, delivery, installation, and commissioning of the solar-powered water pumping facility with distribution system	Serve at least 200 IPs to benefit from the facility.	x	x			x	x			2
2. Complement the solar-powered water pumping system with a distribution system by providing the primary pipes of the system	Consultation meetings with LGU-San Jose's engineering office re proper lay outing of the water-pumping facility and the distribution system	Conduct at least 2 consultative meetings with LGU-San Jose's engineering office	x	x			x	x			2
3. Tap the LGU-San Jose to provide counterparts, especially for the secondary pipes of the distribution system and the workforce to construct the facility	Meetings with project stakeholders to secure commitment and counterpart funding for the project	Conduct at least 2 stakeholders' meetings with LGU-San Jose	x				x				1
4. Improve the productivity and enhance the well-being of the IPs in the area	Training on the operation and maintenance of the solar-powered water pumping facility with distribution system Training on corn and cassava processing for other IPs	Conduct at least one (2) training activities for the IPs.			x		x				1

DOST Form 5
B – EXPECTED OUTPUTS

- (1) Program Title: Community Empowerment through Science and Technology
 (2) Project Title: Solar-powered Domestic Water Generation Facility with Distribution System for Indigenous People of San Jose
 (3) Project Duration (number of months): 12 months implementation & 24 months monitoring
 (4) Project Start Date: February 2023 (5) Project End Date: February 2024

(9) EXPECTED OUTPUTS (6Ps)	Y1 Objectively Verifiable Indicators (OVIs)				Y2 Objectively Verifiable Indicators (OVIs)				Y3 Objectively Verifiable Indicators (OVIs)				Total	Q4	Q3	Q2	Q1	
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4				
Publications																		
Patents/IP																		
Products																		
People Services	x	x			2													
Places and Partnerships	x				1													
Policy																		
(10) POTENTIAL IMPACTS (2Is)																		
Social Impact			x		1		x	x	x		x	x	x	x	x	x	x	4
Economic Impact																		4

DOST Form 5
C – RISKS AND ASSUMPTIONS

(1) Program Title Community Empowerment through Science and Technology
 (2) Project Title: Solar-powered Domestic Water Generation Facility with Distribution System for Indigenous People of San Jose
 (3) Project Duration (number of months): 12 months implementation & 24 months monitoring
 (4) Project Start Date: February 2023 (5) Project End Date: February 2024

OBJECTIVES	(11) RISKS AND ASSUMPTIONS	(12) ACTION PLAN (use separate sheet if necessary)
Tap the LGU-San Jose to provide counterparts, especially for the secondary pipes of the distribution system and the workforce to construct the facility	Delay in the release of LGU-San Jose's counterpart funds would negatively affect project implementation.	The proposed Domestic Water Generation Facility with Distribution System is standalone. There are provisions for additional pipes that could be used as secondary pipes for the system.

DOST Form 5
PROJECT WORKPLAN, EXPECTED OUTPUTS, RISKS AND ASSUMPTIONS

I. General Instruction: Submit through the DOST Project Management Information System (DPMIS), <http://dpmis.dost.gov.ph>, the project workplan, expected outputs, and risks and assumptions together with the project proposal. Also, submit four (4) copies of these forms together with the proposal. Use Arial font, 11 font size.

II. Operational Definition of Terms:

1-2. Program/Project Title- the identification of the Program and its component projects.

3-5. Project Duration and Project Start/End Date- refer to the grant period or timeframe that covers the approved start and completion dates of the project, and the number of months the project will be implemented.

6. Objectives- statements of the general and specific purposes to address the problem areas of the project.

7. Target Activities- set of fixed works that needs to be conducted for the achievement of the project objectives.

8. Target Accomplishments- measurable and positive results of completing project activities.

9. Expected Outputs- deliverables of the project based on the 6Ps metrics (Publications, Patents/Intellectual Property, Products, People Services, Places and Partnerships, and Policy).

a. **Publication-** published aspect of the research, or the whole of it, in a scientific journal for peer review. (get Definition from DOST OUTcomes)

b. **Patent/Intellectual Property-** proprietary invention or scientific process for potential future profit.

c. **Product-** invention with a potential for commercialization.

d. **People Services-** people or groups of people, who receive technical knowledge and training.

e. **Partnership-** linkage forged because of the study.

f. **Policy-** science-based policy crafted and adopted by the government or academe as a result of the study.

10. Potential Impacts

a. **Social Impact-** refers to the effect or influence of the project to the reinforcement of social ties and building of local communities.

b. **Economic Impact-** refers to the effect or influence of the project to the commercialization of its products and services, improvement of the competitiveness of the private sector, and local, regional, and national economic development.

11. Risk- refers to an uncertain event or condition that its occurrence has a negative effect on the project.

Assumption- refers to an event or circumstance that its occurrence will lead to the success of the project.

12. Action Plan- proposed activities to address the risks and assumptions

OR, is the project committed to investing project staff time in building capacities within the project to integrate GAD or promote gender equality? (possible scores: 0, 0.5, 1.0)			x	1	
10.0 Relationship with the agency's GAD efforts (max score: 2; for each item, 0.67)				2	
10.1 Will the project build on or strengthen the agency/ PCW/ government's commitment to the empowerment of women? (possible scores: 0, 0.33, 0.67)			x	0.67	
IF THE AGENCY HAS NO GAD PLAN: Will the project help in formulating the implementing agency's GAD plan?					
10.2 Will the project build on the initiatives or actions of other organization in the area? (possible scores: 0, 0.33, 0.67)			x	0.67	
10.3 Does the project have an exit plan that will ensure the sustainability of GAD efforts and benefits? (possible scores: 0, 0.33, 0.67)			x	0.66	
TOTAL GAD SCORE FOR THE PROJECT IDENTIFICATION AND DESIGN STAGES				20	

Interpretation of the GAD score

- 0 - 3.9 GAD is invisible in the project (proposal is returned).
- 4.0 - 7.9 Proposed project has promising GAD prospects (proposal earns a "conditional pass," pending identification of gender issues and strategies and activities to address these and inclusion of the collection of sex-disaggregated data in the monitoring and evaluation plan).
- 8.0 - 14.9 Proposed project is gender-sensitive (proposal passes the GAD test)
- 15.0 - 20.0 Proposed project is gender-responsive (proponent is commended).

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