

Dynamic retail electricity tariffs: choices and barriers

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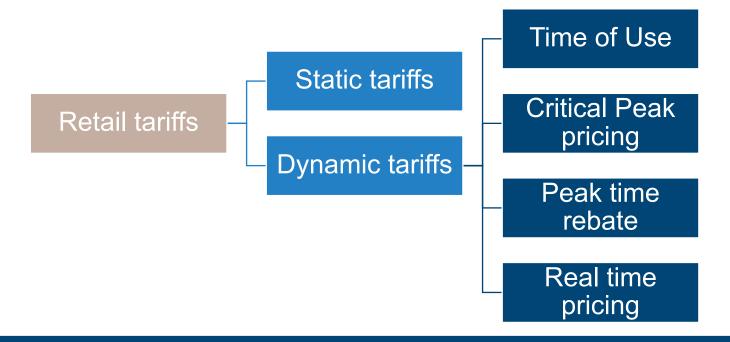
Contents

- How can we classify retail tariffs?
- What are the design choices that need to be made?
- What are the barriers for dynamic tariffs?





Taxonomy of Retail Tariffs



Definition of dynamic tariff: Tariffs that vary in time to provide an economic signal that encourages the consumer to change their consumption patterns to reach an optimal socio-economic use of electricity.





Identifying choices and barriers while introducing dynamic prices FSREE

Europe

- France
- Sweden
- Norway
- Estonia
- Finland
- •Great Britain
- Portugal

US & Latin America

- California
- Connecticut
- New York
- Brazil

Australia & Asia

- New South Wales
- Victoria
- Queensland
- Japan

Africa

South Africa



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Highlights^t

- Streen international case studies on the implementation of dynamic retail electricity tariffs are reviewed to identify the design and implementation choices that have to be made when introducing such tariffs.
- Two primary design choices are identified: 1) the time block length, which means the number of distinct tariff levels; and 2) the price periodicity, which is the time interval between revisions of the tariff. Time-of-use tariffs are widely used and they can be the first step in applying dynamic tariffs before moving to more advanced approaches such as real-time pricing.
- Two types of implementation choices are identified: 1) those made by the regulator regarding regulatory interventions to protect vulnerable customers; and 2) those made by consumers regarding whether to opt for a dynamic tariff and the selection of a suitable dynamic tariff option.
- The implementation of dynamic retail tariffs depends on the availability of physical and information and communication technology (ICT) infrastructure, the maturity of the power market design and consumer behaviour.
- Before implementing dynamic tariffs, it is essential to conduct a careful cost-benefit analysis of the effects on consumers, suppliers and the overall implementation system. Moreover, enabling innovative business models and technologies will help to derive the maximum benefit from the application of dynamic tariffs.









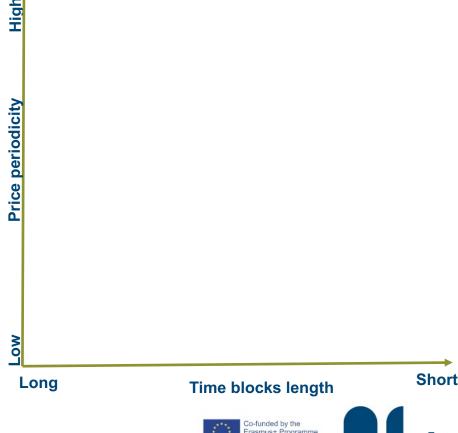
Primary Design Choices

Time block length

 Time block length refers to the number of distinct tariff periods into which a day is divided,

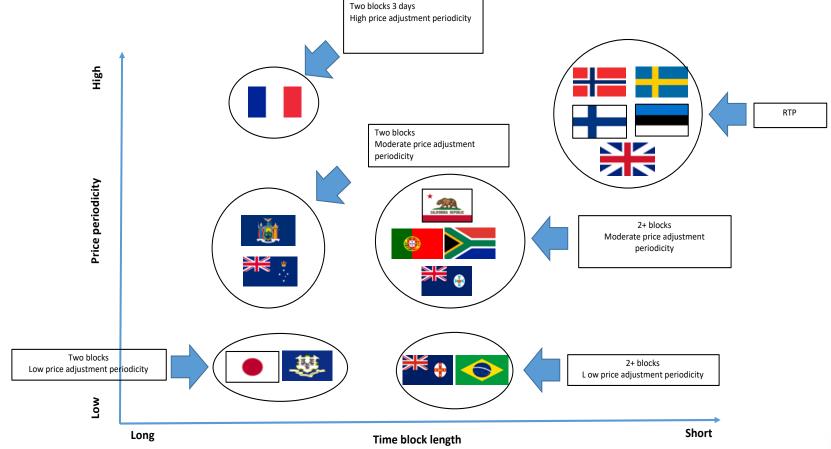
Price periodicity

 How often are prices updated for given time period





One size does not fit all....

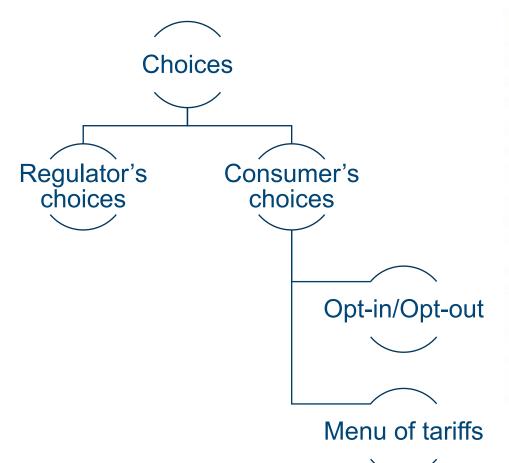


Tempo Tariff





Implementation choices



Country	Regulatory intervention
Estonia	The regulator has the right to control prices
France	A regulated tariff option, a subsidy for the energy-poor
Finland	Last resort supplier (DSO)
Great Britain	Retail price caps and last resort supplier
Norway	Last resort supplier (DSO)
Portugal	Last resort supplier
Sweden	Last resort supplier
California	A framework for ensuring adequate supply
Connecticut	Utilities are obliged to provide standard service
New York	Customers are protected under the Energy Consumer Protection Act
Brazil	Default tariffs
Victoria	Default tariffs
Queensland	Last resort supplier
NSW	Default tariffs
Japan	Last resort supplier
South Africa	Last resort supplier





Implementation barriers



Physical and ICT infrastructure requirements



Market arrangement requirements



Consumer behaviour





Thank you!

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