

VIII World Forum on Energy Regulation Lima, Peru, 2023

Panel: Innovation and disruptive technologies – the regulator’s
role and the dilemmas we face

Technology enabling new market actors



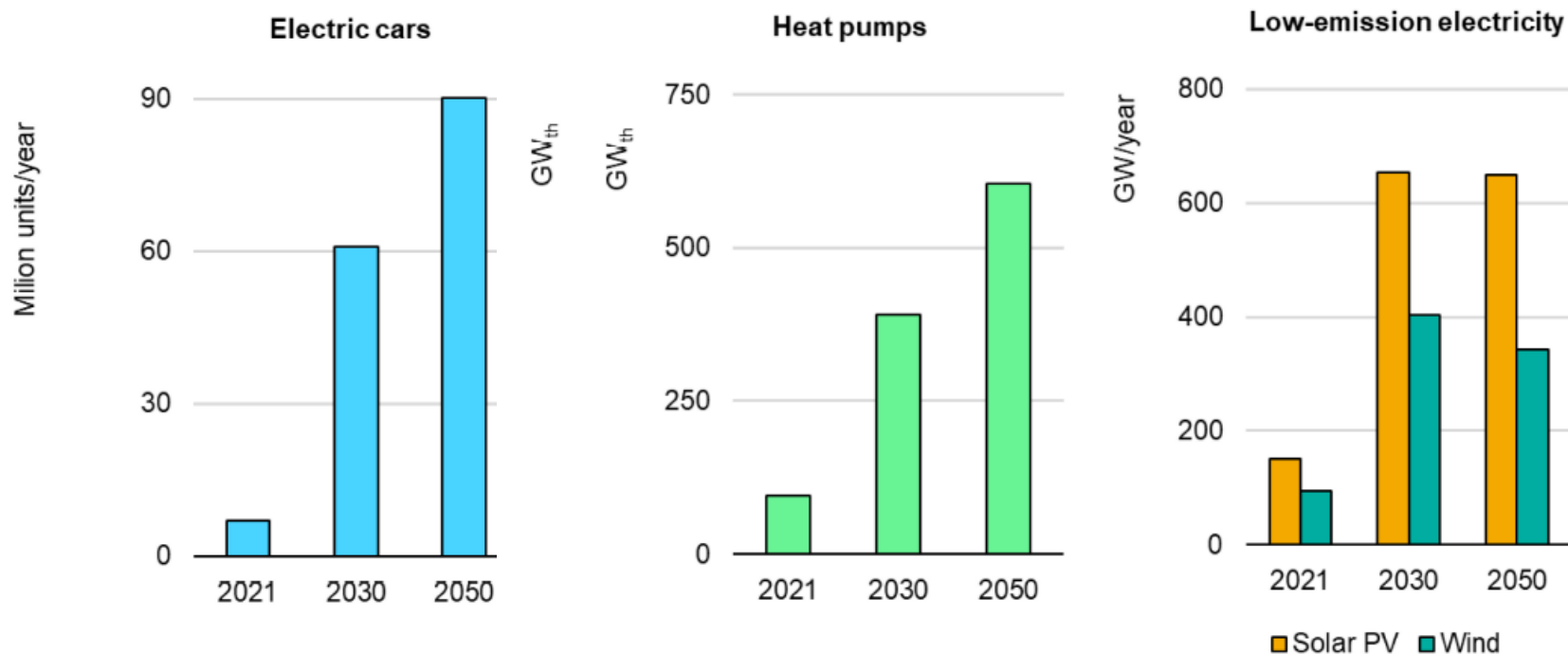
VIII WFER
PERÚ 2023

23 August 2023

Paulo Oliveira (Portugal, ERSE)

A strong energy policy towards decarbonisation, enabled by new and cheaper technologies is (rapidly) driving change in the energy sector.

A “new” sector needs “new” regulation.



European regulators have adopted an adaptive regulation approach for the energy transition



NRAs already rely on experimental regulatory tools to test and anticipate future evolutions

Design of pilot projects



Examples

- RES generation
- Energy sharing
- Adaptive thermostats
- Smart charging of electric vehicles
- Energy storage
- Sector coupling
- New uses for gas networks
- Flexible grid connections
- Smart grid services

Regulation can play different roles and use different levels of initiative or support

Pilots may be NRA driven (“top down”) or market driven (“bottom up”)

Figure 1. Characterisation of different forms of regulatory experimentations

	Regulatory sandboxes	Regulatory pilot projects	Pilot regulations
Innovation approach	Bottom up The identification of regulatory barrier is initiated by innovators	Top down The regulator identifies legislative provisions for testing and calls for applications by interested organisations	
Way of granting the derogations	Case-by-case basis	Derogations are only granted to the actors that are successful in the application procedure	Derogation automatically applies to all parties that comply with certain eligibility criteria
Geographical scope of the experimentation	Nationwide	Local	Nationwide

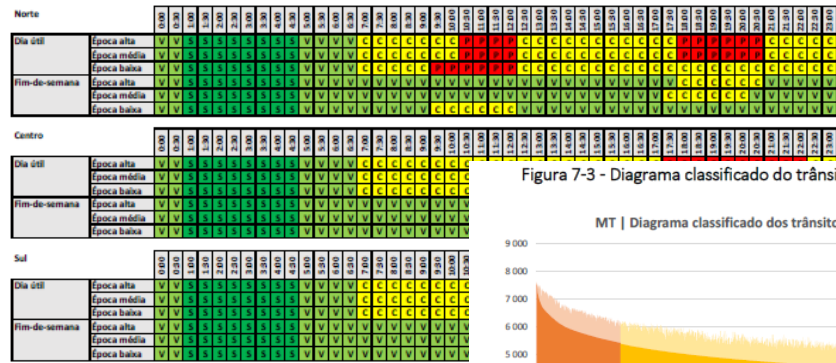
European Commission’s Joint Research Centre, 2023, *Making energy regulation fit for purpose. State of play of regulatory experimentation in the EU.*

Pilot regulations use standard public consultations and discussion in the process

Pilot regulations

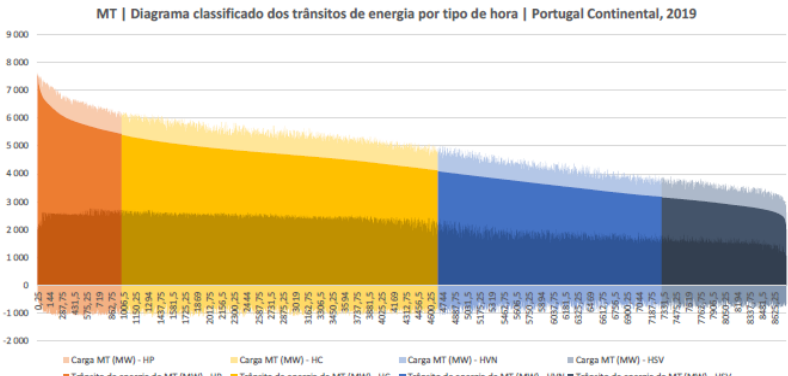
- Dynamic grid tariffs
- Demand response for balancing services

Figura 5-22 - Períodos horários nas áreas de rede do Norte, Centro e Sul, por tipo de dia e época



2021

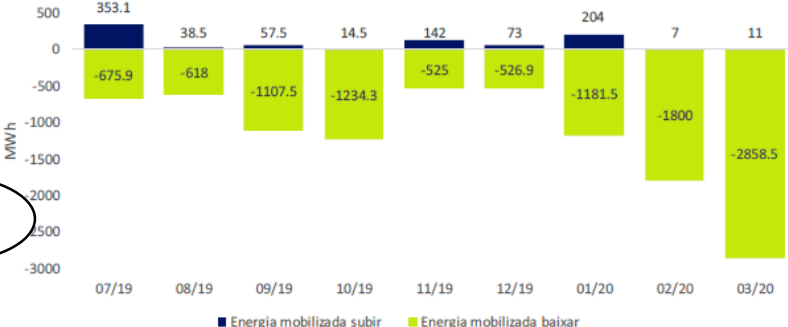
Figura 7-3 - Diagrama classificado do trânsito em MT, por período horário, Portugal continental, 2019



ERSE
ENTIDADE REGULADORA
DOS SERVIÇOS ENERGÉTICOS

2018

Energia Mensal Mobilizada solicitada aos participantes do Projeto-Piloto



DSOs are driving several pilot projects to cope with the energy transition

Pilot projects

- Energy sharing in communities for self-consumption
- Flexibility services to the DSO



2022



Os próximos passos envolvem fundamentalmente um aumento significativo das atividades de envolvimento de potenciais PSFs

Importa definir procedimento de formalização do piloto junto do ERSE (incluindo tratamento dos encargos associados aos contratos)

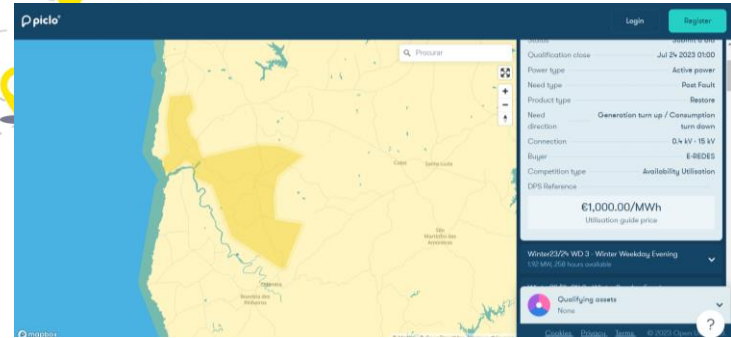
Previsão de início dos contratos de flexibilidade

Estabelecimentos com potenciais PSFs em zonas delimitadas

Sessão de alinhamento com ERSE, para validação de processos e metodologias



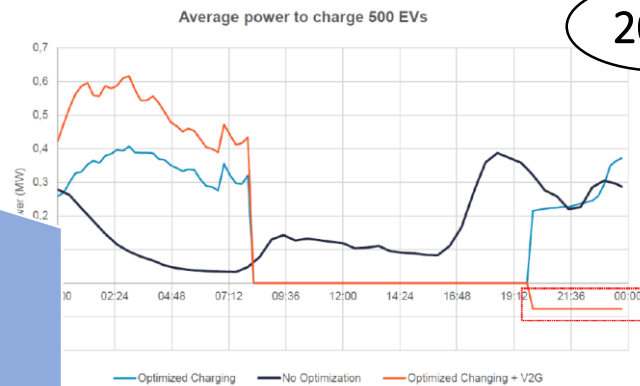
2023



Portugal has implemented several of these tools according to the cases at hand



2020



Regulatory Sandboxes

- V2G projects
- P2P trading in energy communities

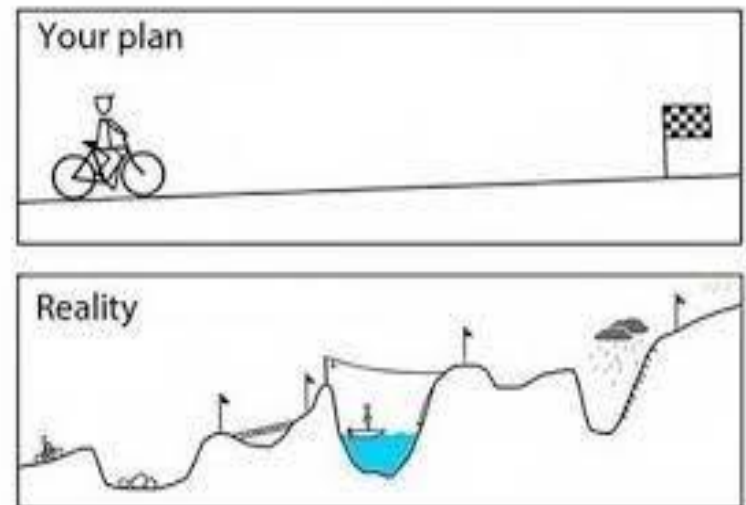
ÉVORA
Câmara Municipal

2022



Some takeaways:

1. Need for legal basis and regulatory leeway
2. Need for adequate resources and expertise
3. New areas/actors for energy regulation
4. Defining adequate KPI for project evaluation
5. Ensuring transparency and participation for pilots and their results
6. New/improved regulatory tools
7. Proportionate regulation





Thank you!

EDIFÍCIO RESTELO
Rua Dom Cristóvão da Gama, 1, 3º
1400-113 Lisboa
Portugal
Tel: +(351) 21 303 32 00
Fax: +(351) 21 303 32 01 • e-mail: erse@erse.pt
url: <http://www.erse.pt>