

enefirst.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 839509. The sole responsibility for the content of this presentation lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.



What is E1st?

Zsuzsanna Pató
RAP

28 May 2020

A person in a blue suit is shown from the chest up, holding a glowing, translucent orb in their right hand. The background is a dark blue, abstract network of white dots connected by thin, glowing blue lines, resembling a molecular or digital structure. The overall lighting is cool and futuristic.

MAKING THE ENERGY EFFICIENCY FIRST PRINCIPLE OPERATIONAL

Growing population in Brooklyn-Queens

Requires a new substation

OR

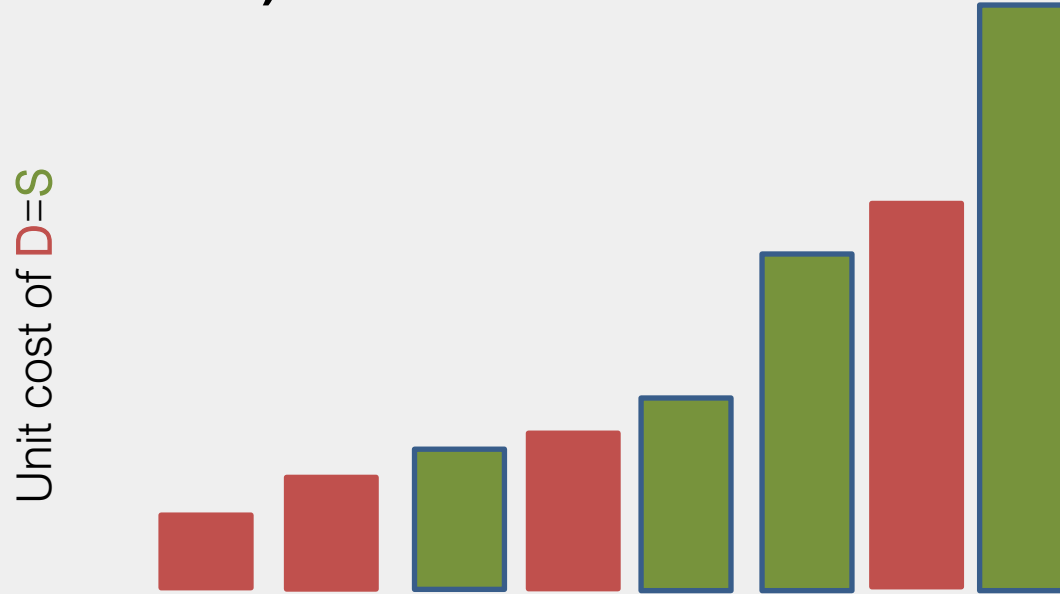
Peak load reduction by 52 MW in ANY WAY

Competitive bidding
EE, PV, CHP, battery storage, fuel cells
\$1 bn saving at a cost of \$200 m

S = D

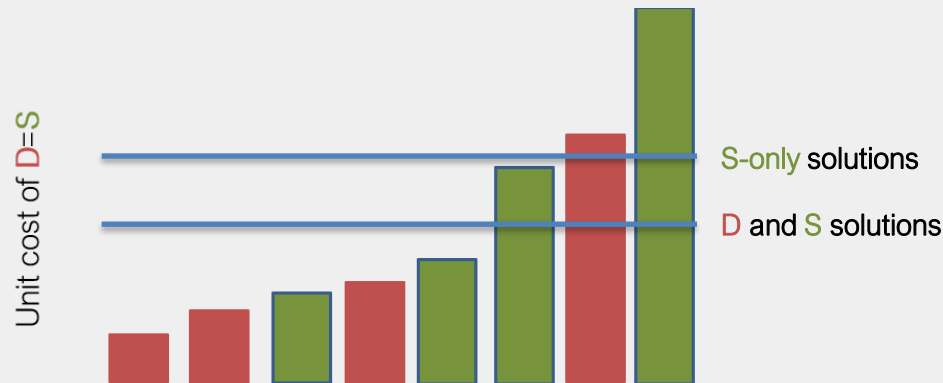
- Not only in aggregate but also coincidentally
- S aligns with given D
- S means fuel availability AND infrastructure to deliver it
- D is not fixed:
 - Consumers have certain willingness to pay for energy and might be happy to limit their demand
 - If they are given the chance

A (yet theoretical) commonsense



Barriers of equal treatment

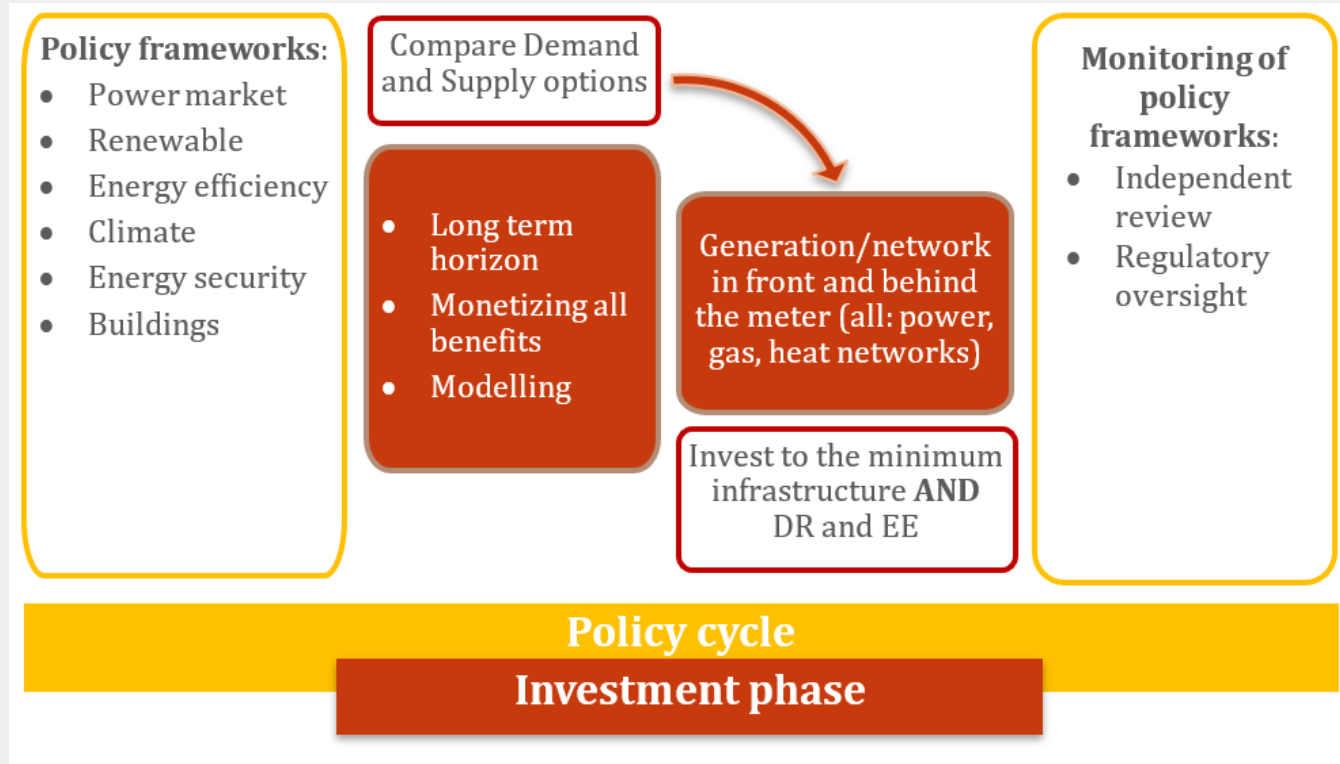
- Mental: new, not reliable
- Structural: smaller units, multitude of actors, various technologies
- Regulatory: limited access to markets, biased incentives
- Result:



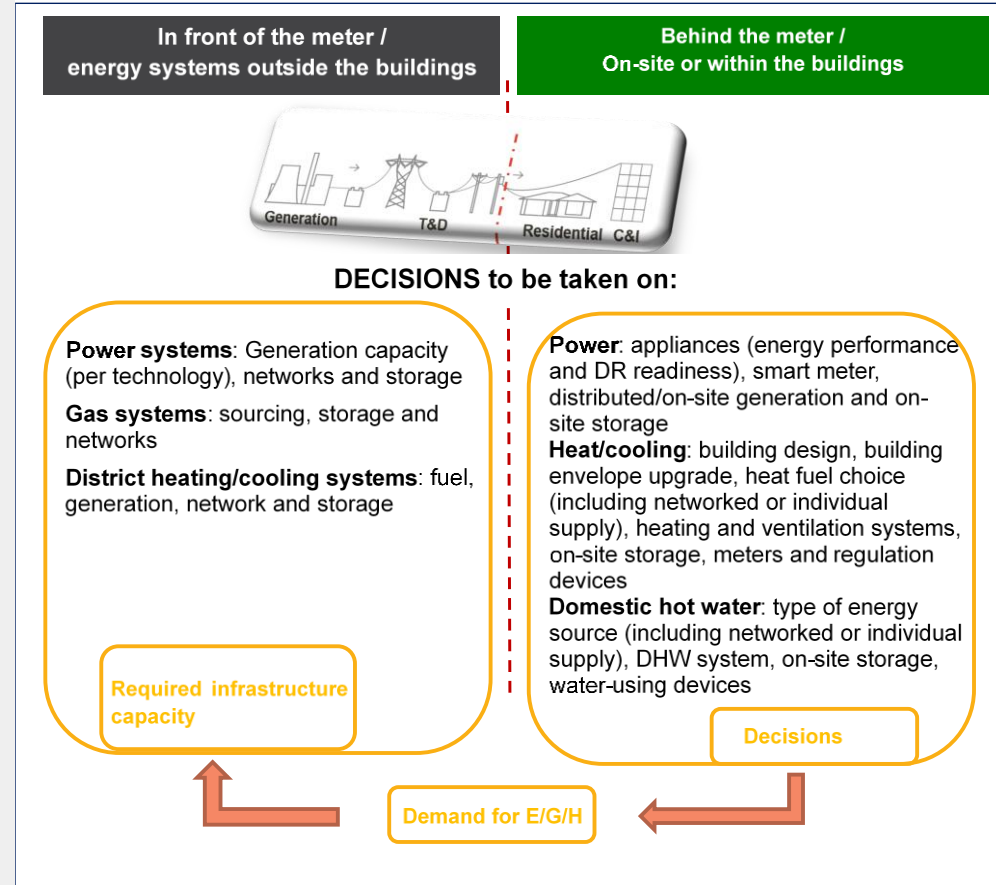
Efficiency First (E1st) is not just another name for energy efficiency.

*Efficiency First gives priority to demand-side resources whenever they are more **cost effective** from a **societal perspective** than investments in energy infrastructure in meeting policy objectives. It is a decision principle that is **applied systematically** at any level to energy-related investment planning and enabled by an 'equal opportunity' policy design.*

Investments and policies



Investment into what?

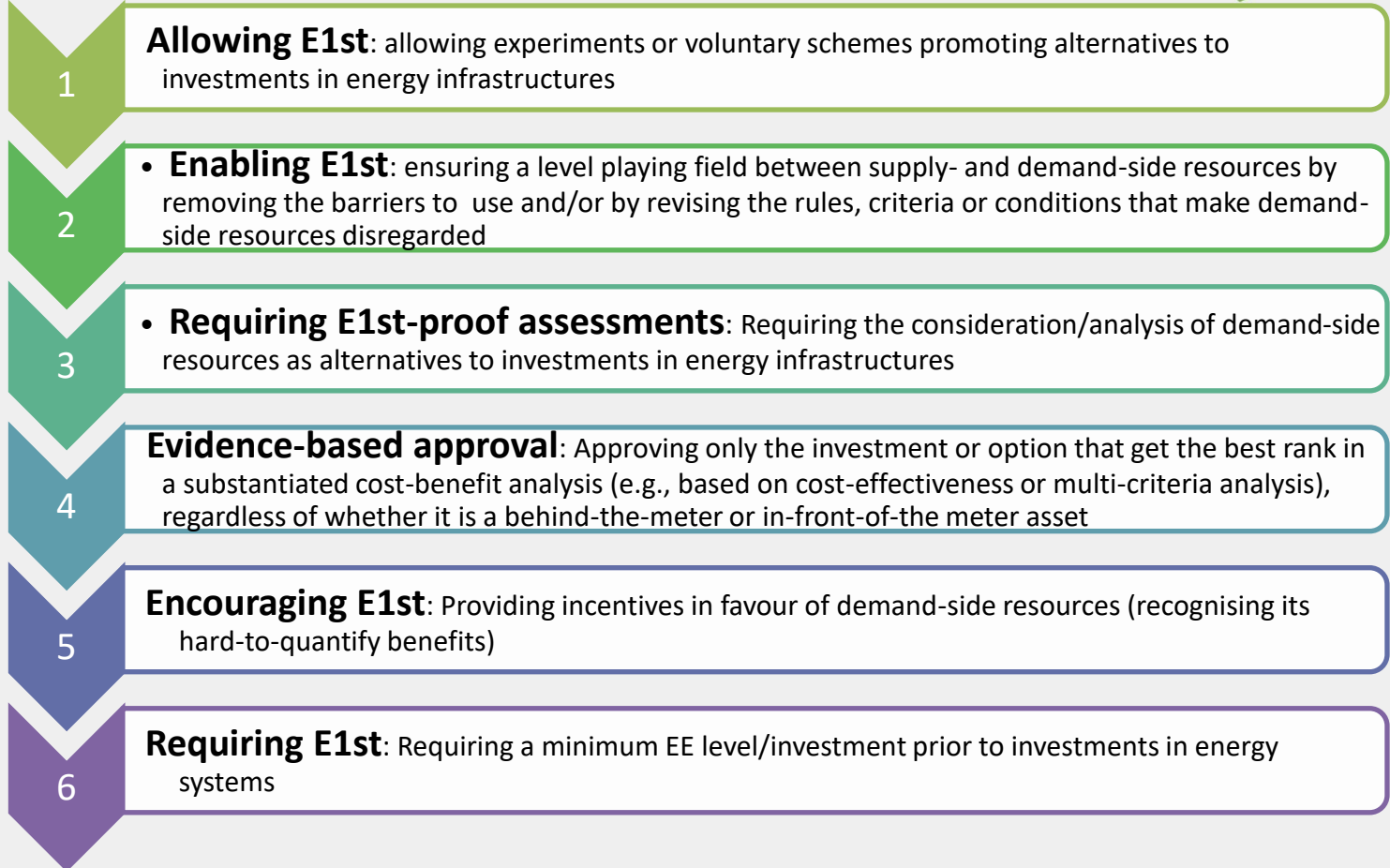


No.	Case
1.	Ecowatt programme (voluntary Demand Response through instant messaging)*
2.	Using ToU (Time-of-Use) tariffs to engage consumers and benefit the power system
3.	Social Constraint Management Zones to harvest demand flexibility
4.	Demand flexibility in District Heating networks
5.	FACE (French fund for rural electrification) allowing Demand-Side Management projects as an alternative*
6.	Participation of Demand Response (DR) in French wholesale electricity market
7.	Enabling rules for Demand Response (DR) aggregators
8.	Decoupling utility sales and revenues
9.	Energy Efficiency Obligation Schemes as a way to involve energy companies in behind-the-meter investments*
10.	Replacing a polluting power plant with behind-the-meter resources
11.	Updating distribution system planning rules in Colorado and Nevada
12.	Assessing the value of demand-side resources
13.	Water heaters as multiple grid resources
14.	Building Logbook – Woningpas: Exploiting efficiency potentials in buildings through a digital building file
15.	Optimising building energy demand by passive-level building code
16.	Energy Efficiency as infrastructure*
17.	Deferring T&D (Transmission & Distribution) infrastructure investments through local end-use efficiency measures
18.	Building energy performance requirements of the Irish Heat Pump System grant
19.	Fabric First approach under the Better Energy Communities grant scheme
20.	Linking RES (Renewable Energy Sources) support to building energy performance

Categorizing the best practices

	Provision	
	General	Investment
In-front-of-the-meter	A	B
Behind-the-meter	C	D

Best practices



Efficiency First (E1st) in the pipeline

1. *“A more circular energy system, with “energy-efficiency-first” at its core“*

(Creating the foundation for a climate-neutral economy: An EU
Strategy for Energy System Integration - draft)

2. **TEN-E Revision:** not proposing grid projects but bottlenecks/problems and assess all options:

- Reduction of demand (EE and DR)
- Higher utilization of existing network assets (smarting technologically and regulatory-wise)
- Capacity extension



Thank you

Zsuzsanna Pató

Where to find the reports:

<https://enefirst.eu/reports-findings/>

Where to find the examples:

<https://enefirst.eu/examples/>

How to register to the ENEFIRST newsletter:

<https://enefirst.eu/stay-in-touch/>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 839509. The sole responsibility for the content of this presentation lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.