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The energy customer: The Changing Energy Market and its Regulations (Prosumers, End – user Pricing, Changing Role of the DSOs)

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Panelists

- ❖ **Ilka Lewington**, Principal Consultant, DNV GL – Energy, *Germany*
- ❖ **Ion Lungu**, Chairman, Romanian Electricity Supplier's Association, *Romania*
- ❖ **Zoltán Nagy**, Energy Manager, Middle East and Central- & Eastern-Europe at Linde Group, *Hungary*
- ❖ **Ellen Nowak**, Second Vice President, National Association of Regulatory Utility Commissioners (NARUC); Chairperson, Wisconsin Public Service Commission, *the USA*
- ❖ **Hando Sutter**, CEO, Eesti Energia, *Estonia*



Major trends changing the Energy Industry

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Environment

Increasing legislative pressure on non-renewable energy

Challenging waste targets

Increasing production cost

Rise of cyber-threats and –terrorism



Technology

(Industrial) Internet of Things

Smart Grids and Smart Metering

Micro- and local energy generation

Innovations in renewable tech

Big data & analytics



Customer

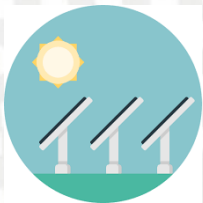
Values freedom of choice

Is online, mobile, connected

Expects customized/ personalized service

Consumers > prosumers

Expects synergies between different products

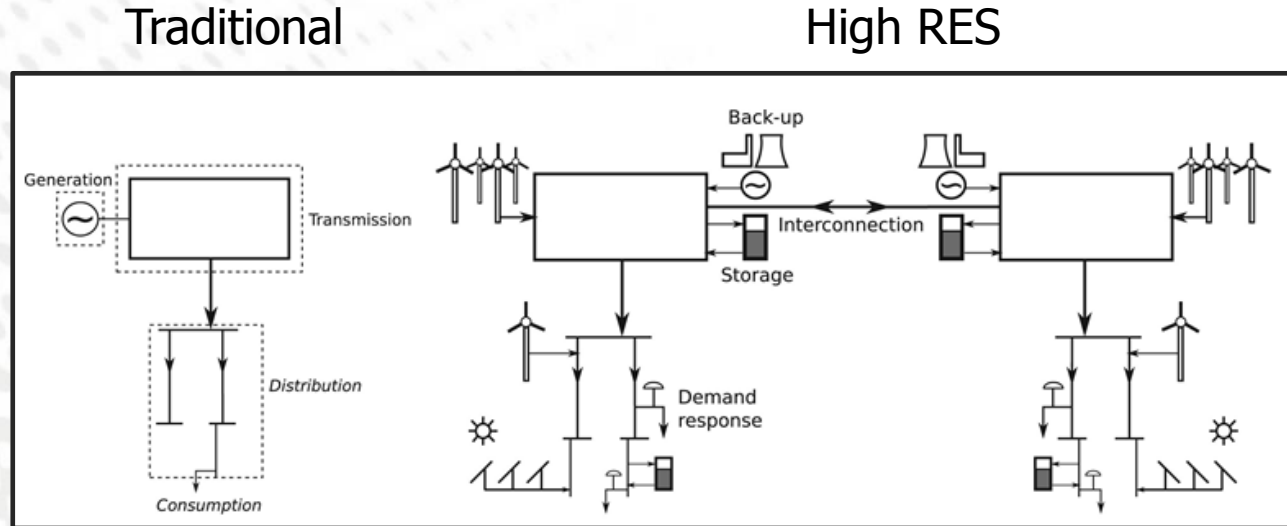


Renewables integration

Renewables integration in the market



Flexibility as a key – flexible generation, storage, demand response, interconnection and balancing

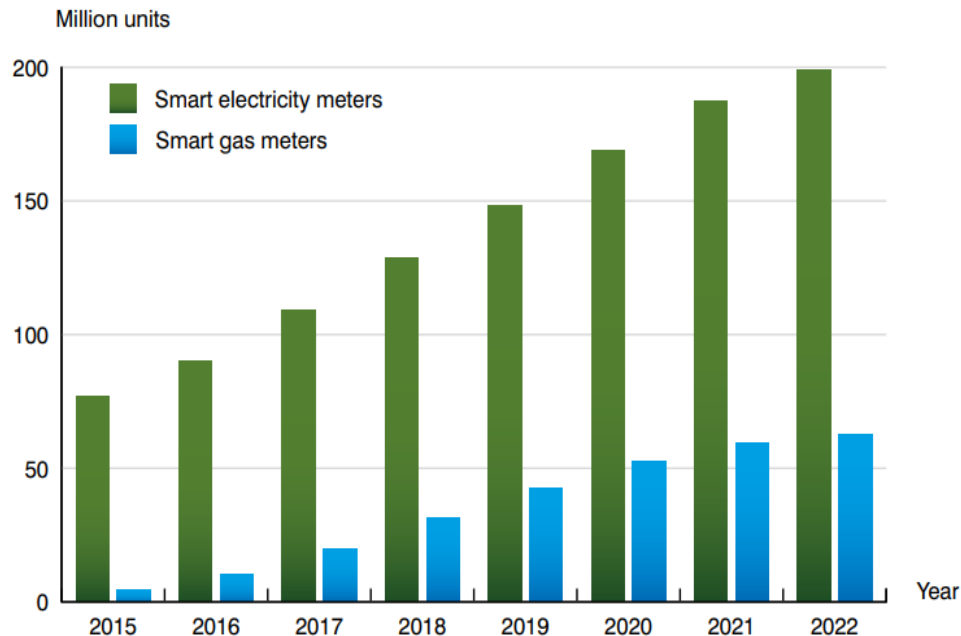




Role of users

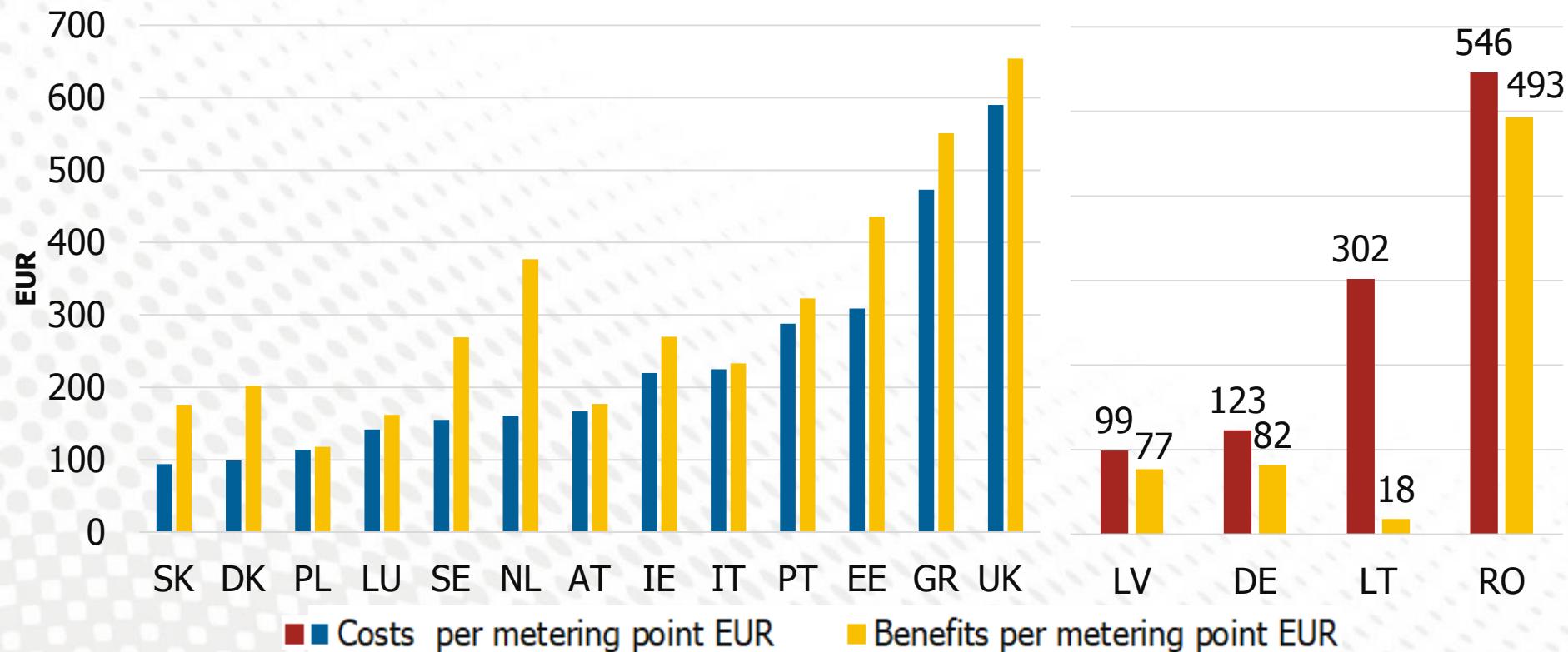
Users in the energy market

- 94 million (**33%**) electricity consumers out of 283 million in the EU have smart metres*
- The goal to be reached by 2020 – deployment of smart metres for **almost 72%** of European electricity consumers
- Mass deployment of smart metres in Western EU countries (Italy, Sweden, Denmark – *front runners*)



Installed base of smart gas meters (EU28+2 2015–2022) and installed base of smart electricity meters (EU28+2 2015–2022)

Costs and benefits for smart metering point implementation





New technologies

New technologies



E – vehicles |



Batteries |



Micro and local generation |



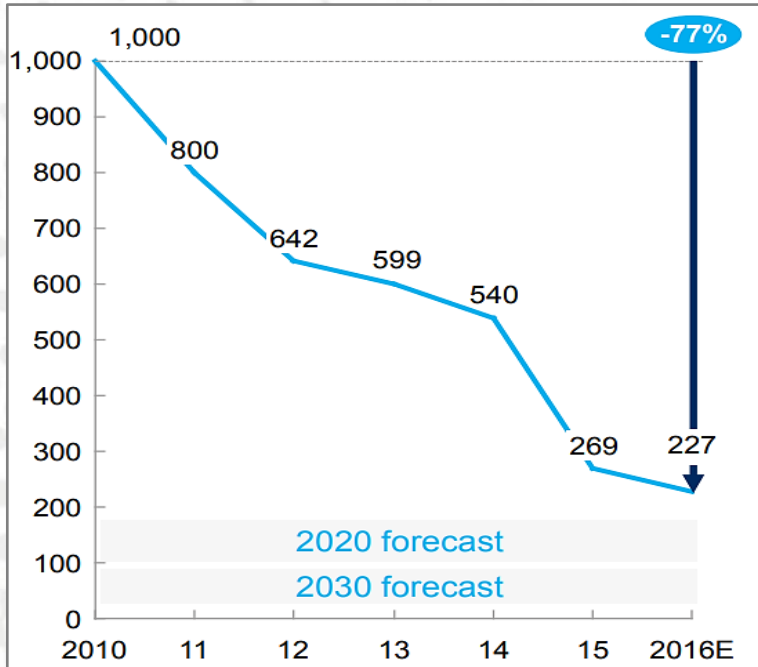
Innovations on renewable technology |



Digital solutions – virtual power plants |

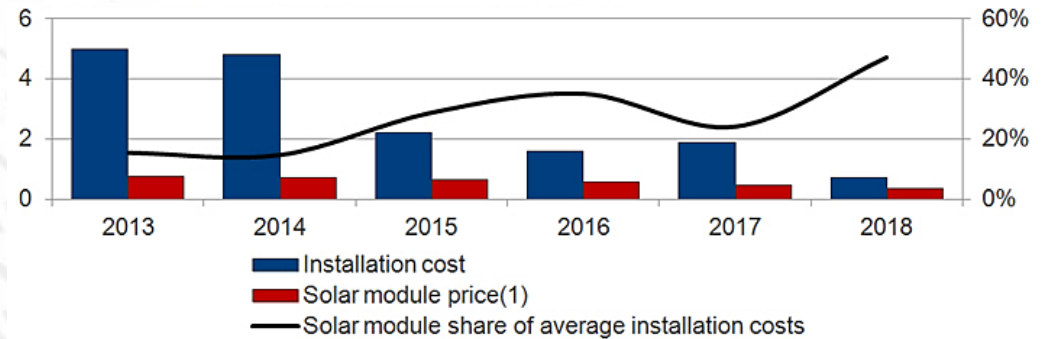
Opportunities for prosumers

Average battery pack price \$ per kWh



Source: MxKinsey & Company, 2017 'Electrifying insights: How automakers can drive electrified vehicle sales and profitability'

Installation costs and solar module price, \$/W



Source: International Ltd: Is solar power cheaper than coal? 02 August, 2017

More questions than answers? Let's find them out together



Question 1



Who should take the action for the energy market digitalization?

DSOs, regulators, suppliers, consumers?

Question 2



What tariff structure should be designed to cover costs for innovative and intelligent technologies, keeping the tariff design fair to all consumers?



How has each country handled reverse electricity flows and what changes have you made with respect to tariffs?

Question 3



How costs can be compensated for prosumers for their produced energy from renewables? Fixed purchased price or market price + the premium (subsidies)? Is the net-metering system sustainable?

Question 4



Who might be prosumers? Only those who produce energy from renewables or other technologies – micro-CHP, batteries? Do criteria need to be developed to set the status 'prosumer'?

Question 5

The significance of energy market openness during the time of new technologies' development.



Does the regulated price in the retail market can have an impact on the entry of new technologies into the market?

Question 6



What is the role of regulators in the changing energy market?

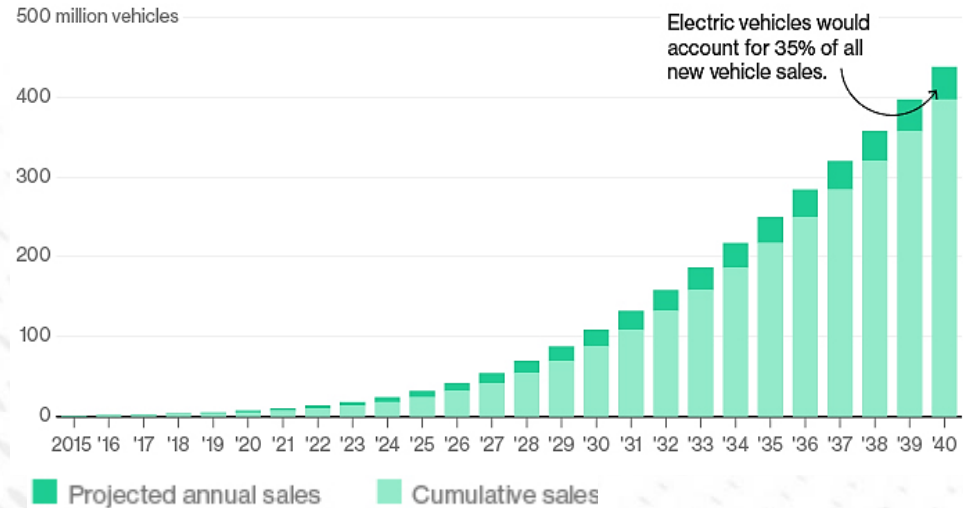
Regulatory tasks – rules for the grid access, licensing and monitoring the market of renewables...?

Question 7

How will the electromobility make an influence for the grid?

How do DSOs need to plan their future growth based on the development of electromobility?

The rise of electric cars



Source: Tom Randal, 'Here's How Electric Cars will cause the next oil crisis', 25th February, 2016

Question 8



Any experience with an energy storage in your country?

Question 9



Should prosumers or DSOs handle the issue by making development of isolated grid systems?

Should the isolated grid be regulated?

THANK YOU FOR YOUR ATTENTION!

- Rolands Irklis, Public Utilities Commission of Latvia



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