



# ***The future role of energy efficiency in Europe's flexibility agenda***

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24 October 2018

# Welcome!



Ministry of Ecological and Solidarity Transition

Directorate General of Energy and Climate (DGEC)



# Agenda



<b>13:00</b>	<b>Welcome</b>
	Keisuke Sadamori, Director of Energy Markets and Security, IEA
<b>13:10</b>	<b>Energy efficiency and flexibility: discussion &amp; debate</b>
	Opening remarks & scene setting by IEA
	Energy efficiency and flexibility – UK perspectives <ul style="list-style-type: none"> <li>• Zak Rich (Ofgem)</li> <li>• Will Broad (BEIS)</li> <li>• Daniel Saker (UKPN)</li> </ul>
	Energy efficiency and flexibility – Market perspectives <ul style="list-style-type: none"> <li>• Peter Connelly (ENEL X)</li> <li>• Matt Golden (Open EE)</li> <li>• Myles McCarthy (Carbon Trust)</li> </ul>
	Open discussion facilitated by IEA
<b>14:40</b>	<b>Energy efficiency and flexibility: solutions</b>
	Innovations in energy efficiency services delivery and commercial models <ul style="list-style-type: none"> <li>• Engie, Total, Greenflex, EnergyPro, Teeside University, Knauf Insulation</li> </ul>
	Q&A facilitated by IEA
<b>15:10</b>	<b>Wrap-up &amp; tour le table</b>
	Summary of related IEA work streams
	Key policy & research gaps that IEA can help address <ul style="list-style-type: none"> <li>• Tour de table</li> </ul>
<b>15:45</b>	<b>Coffee &amp; networking</b>

# European policy context



- **Clean Energy for all Europeans**

- Putting efficiency first
- Achieving global leadership in renewables
- Providing fair deal for consumers



- **Energy Performance & Buildings Directive**

- Establishes '**smart readiness indicator**' methodology to assess building capability to adapt to needs of occupants as well as the grid
- Addresses **EE+RE integration**, as well as transportation efficiency (**EV charge points**)

- **Internal Energy Market**

- New rules on consumer choice & information tools (**dynamic price contracts, smart meters**)
- New market participants (**aggregators, community energy services, data exchange**)
- Clarifying roles / procedures for distribution companies (**DSOs**) and network planning

- **Governance**

- Establishes framework for **National Energy & Climate Plans**
- Directs MS to encourage spread of '**efficiency first**' principle
  - Consider EE as well as DSR in all national **planning, policy & infrastructure investment measures**
  - Carry principle through to **regional & local governments**, as well as **private sector**

## Central research question(s):

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- Whether and to what degree is there a role for energy efficiency in ...
  - Avoiding / deferring network investments?
  - Reducing costs (system-wide wholesale requirements/risks/prices, retail rates)?
  - Addressing challenges due to growth in distributed generation?
  - Helping to modernise the electric grid?
  - Power purchase agreements?
  - Other?

## Evidence base and resources



**Estimating the Value of Energy Efficiency to Reduce Wholesale Energy Price Volatility (ACEEE, 2018 Apr)**

<https://aceee.org/sites/default/files/publications/researchreports/u1803.pdf>

**The Role of Energy Efficiency in a Distributed Energy Future (ACEEE, 2018 Feb)**

<https://aceee.org/sites/default/files/publications/researchreports/u1802.pdf>

**Energy Efficiency in Capacity Auctions: A Historical Review of Value (ACEEE, 2017 Dec)**

<https://aceee.org/sites/default/files/publications/researchreports/u1714.pdf>

**National Standard Practice Manual for Assessing Cost-effectiveness of Energy Efficiency Resources (E4TheFuture, 2017 Spring)** <https://nationalefficiencyscreening.org/national-standard-practice-manual/>

**Putting your money where your meter is: A study of pay-for-performance energy efficiency programs in the United States (NRDC and VEIC, 2017 Jan)** <https://www.nrdc.org/sites/default/files/pay-for-performance-efficiency-report.pdf>

**CalTRACK and OpenEEmeter** <http://www.caltrack.org/>, <https://www.openee.io/>

**The Metered Energy Efficiency Transaction Structure (MEETS Accelerator Coalition)**

<http://www.meetscoalition.org/download/795/>

**Flexibility Value Stacking, and Flexibility Value Chain (USEF, 2018 Oct)** <https://www.usef.energy/new-white-paper-flexibility-value-stacking/>, <https://www.usef.energy/new-update2018-flexibility-value-chain/>

## Other examples (not represented today)



**FREEDOM** (Flexible  
Residential Energy Efficiency  
Demand Optimisation and  
Management)

Fully-hybrid heat pumps  
providing demand flexibility

<https://www.westernpower.co.uk/projects/freedom>



Energy efficiency as  
alternative to network  
reinforcement

<https://www.ssen.co.uk/save/>

...Others?

## Lingering institutional barriers?

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'Thank you for considering us...The programme certainly looks interesting. However, unfortunately, energy efficiency is outside the remit of the Agency's activities. Therefore, it is better if we decline.

If the iEA has topics which are closer to (classical) energy regulation, we would be happy to be involved.'

'While we very much appreciate the below invitation, ... energy efficiency is not really a topic where regulators like to speak up, they argue that energy efficiency is not (yet!) their core responsibility.'



## Facilitated discussion (60 mins)

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- *Can energy efficiency have a role in Europe's flexibility agenda?*
- *Does flexibility provide a new route to market for energy efficiency services?*
- *What policy, regulatory & market conditions will enable energy efficiency at scale?*

## Detailed workshop questions (if needed)



- **Can energy efficiency have a central role in Europe's flexibility agenda?** How can these benefits be comparatively valued alongside the supply and demand side resources that are necessary to enable Europe's transition to a decarbonised energy system? For example:
  - Can energy efficiency, when combined with demand response and electrification solutions, realistically be part of the least-cost pool of distributed resources for balancing grids?
  - Can energy efficiency offer a compelling alternative to network reinforcement or new capacity?
- **Can demand flexibility open the door to achieving Europe's energy efficiency ambitions?**
  - What are the required steps to better align these policy goals?
  - How can the energy policy and regulatory departments be better integrated and aligned?
  - What is the role for market and networks operators, and how can we harness the DNO to DSO transition?
- **How will technology solutions and business models need to adapt and evolve for demand flexibility to enable a new route to market for energy efficiency services?** For example:
  - What if energy efficiency impacts were determined using standardised, automated protocols capable of producing reliable, real-time measurements?
  - And what if these impacts could be valued as well as forecasted alongside other time- and location-specific resources?
  - What sorts of new business models would this enable?



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