

Demand Side Management: Towards Energy Efficiency

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DSM details...

The screenshot shows the homepage of the IEA Demand Side Management Energy Efficiency website. At the top left is the logo for 'ieadsm energy efficiency'. The navigation menu includes 'Home', 'About Us', 'Our Research', 'Participation', 'News & Events', 'DSM University', and 'Affiliates'. A search bar and 'Log In'/'Join' buttons are in the top right. The main heading reads 'Welcome to IEA Demand Side Management Energy Efficiency'. Below this, a paragraph states: 'IEA Demand Side Management Energy Efficiency is an international collaboration of 16 countries and sponsors working together to develop and promote opportunities for demand-side management (DSM). DSM offers solutions to problems such as load management, energy efficiency, strategic conservation and related activities. The work of the programme is organised through a series of Tasks and reported in a number of publications. It is managed by an Executive Committee (ExCo). Visit the News page for the latest information on our activities.' To the right, a 'Latest News' section lists several newsletters: 'Issue 59 Spotlight Newsletter - December 2015' (20 December 2015), 'Behaviour Change & Energy News' (published weekly by Dr. [...], 16 December 2015), 'Issue 58 Spotlight Newsletter September 2015' (Task 24 - Helping the Behaviour Changers - Nore [...], 29 September 2015), 'Issue 57 Spotlight Newsletter June 2015' (Task 15 - Network Driven DSM: Impacts of Demand-Side [...], 20 June 2015), and 'Issue 56 Spotlight Newsletter March 2015' (Task 25: beware: Energy Efficiency Services in the Making [...], 19 June 2015). At the bottom, a 'Research Spotlight' section features a blue-tinted image of a lightbulb with power lines. The text for Task 25 reads: 'Task 25 - Business Models for a more effective uptake of DSM energy services. This task will focus on identifying and creating effective business models providing viable DSM value propositions that lead to the growth of the demand market for energy efficiency. In addition, this task will focus on identifying and supporting the creation of energy ecosystems in which these business models can succeed.' A 'Read more...' link and a right-pointing arrow are also present.

New Website!

www.ieadsm.org

And more details

DSM Spotlight

The Newsletter of the International Energy Agency Demand-Side Management Programme

december
2015



IEA Energy Efficiency Reducing Energy Bills

Energy efficiency improvements since 1990 in IEA member countries saved over USD 550 billion in energy expenditure by 2014 – larger than the European Union's annual fuel import bill. In the Energy Efficiency Market Report 2015, the IEA states that over the last 25 years energy efficiency improvements have saved USD 5.7 trillion in energy expenditures in the IEA's 29 member countries. "Energy efficiency is a virtual supply of energy, meeting energy services for business and consumers while reducing their energy costs", notes the IEA.

Energy efficiency is not only reducing energy bills for consumers, it is helping governments improve energy security by reducing imports and lowering exposure to

the international energy market. The Energy Efficiency Market Report shows that in 2014, the energy efficiency investments since 1990 have enabled the IEA member countries to avoid USD 80 billion in fossil fuel imports. Germany avoided USD 30 billion in energy imports and boosted its trade surplus by 12% in 2014 while Japan reduced its trade deficit by 8%.

Per capita energy consumption in IEA countries has fallen to levels not seen since the 1980s, yet income per capita has never been higher and access to energy services is continually expanding. The IEA estimates that energy efficiency investments since 1990 have been the most important factor to explain the flattening of

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Note from the Chairman

Which Way are We Heading?

Two articles recently caught my attention. The first was an article in the Dutch Volkskrant on October 27th with the heading "Energy Companies Have Become Less Green". This newspaper annually ranks energy companies and has concluded they used 5% more coal than the year before, as this was the cheapest option. The German company, RWE/Essent ended in last place with a 3 out of 10 ranking.

The second article, "The Green Oil Man" was published in Politico on September 30th. This article was about Fatih Birol taking the office of Executive Director of the IEA. He wants to turn the IEA into a hub of clean energy. The article contained the statement:

"If there is any energy company in the world which thinks that climate change policies will not affect their business strategies, they are making a grave mistake."

By the time this column is published, the Paris COP Summit will have been held, and even if there is an agreement, there will be details to be dealt with. And,

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And Ireland and Nova Scotia

Member Countries
Austria | Belgium | Finland | India
Italy | Netherlands | New Zealand | Norway | South Korea
Spain | Sweden | Switzerland | United Kingdom | United States

Sponsors



The main mission of DSM – Energy Efficiency is to provide to stakeholders:

- *Materials that is readily applicable for them in crafting and implementing policies and measures.*
- *Knowledge about technology and applications that either facilitate operations of energy systems or facilitate necessary market transformation.*
- *Insights that enables and promotes behavioural interventions to ensure the uptake and implementation of energy efficiency in the society.*

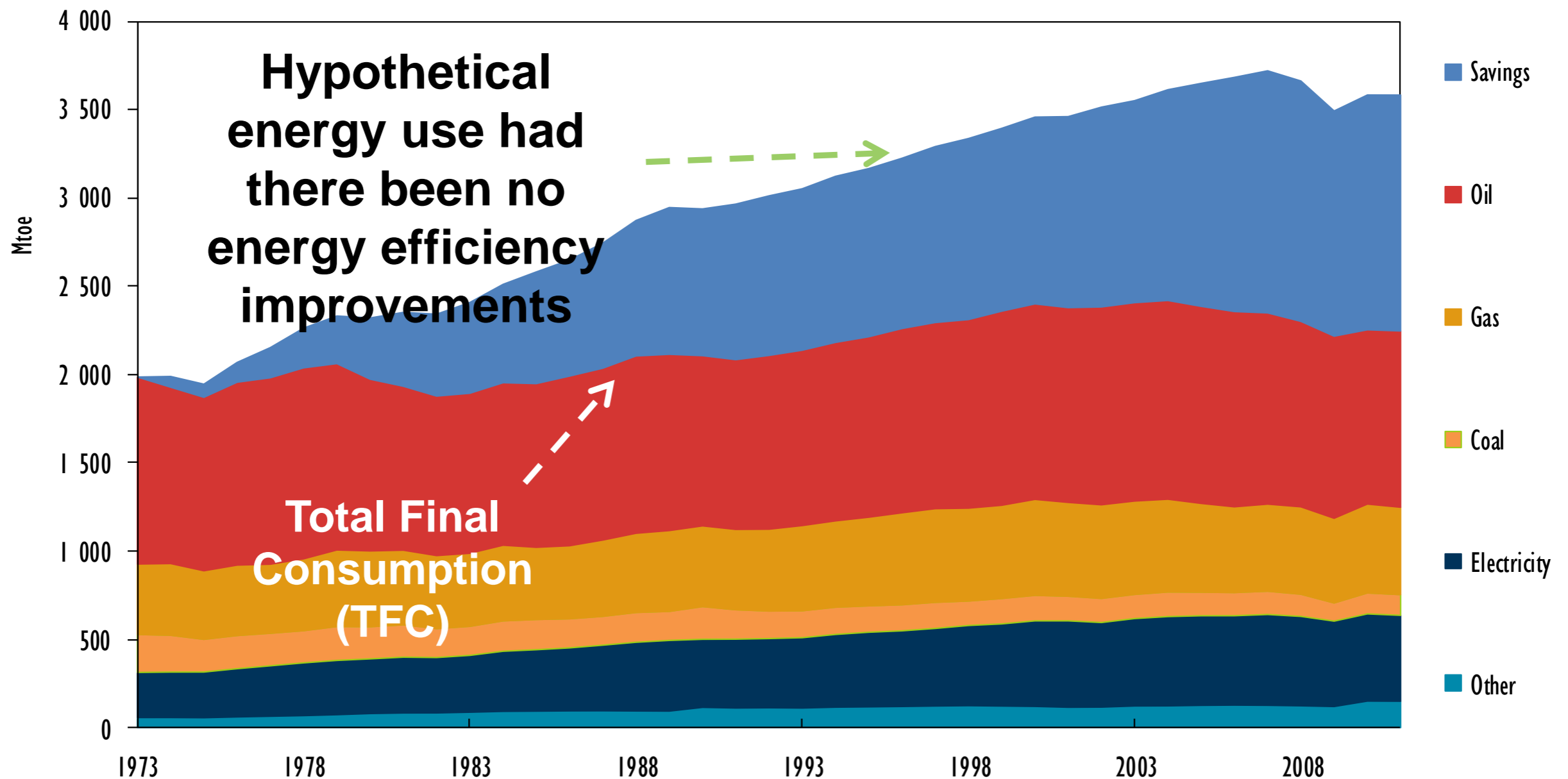
The stakeholders should as a consequence be able to structure and design “smart” systems with “High-value Distributed Energy Resources (DER)” that applies “IDSM – Integrated Demand Side Management”. Such systems will be characterised by:

- *Resources are both physical (fuel and technology) and human. The user is one of the resources.*
- *Integration of Load Management (DR), Load Level (EE), Distributed Generation (DG), Storage and Renewable Energy (RES)*

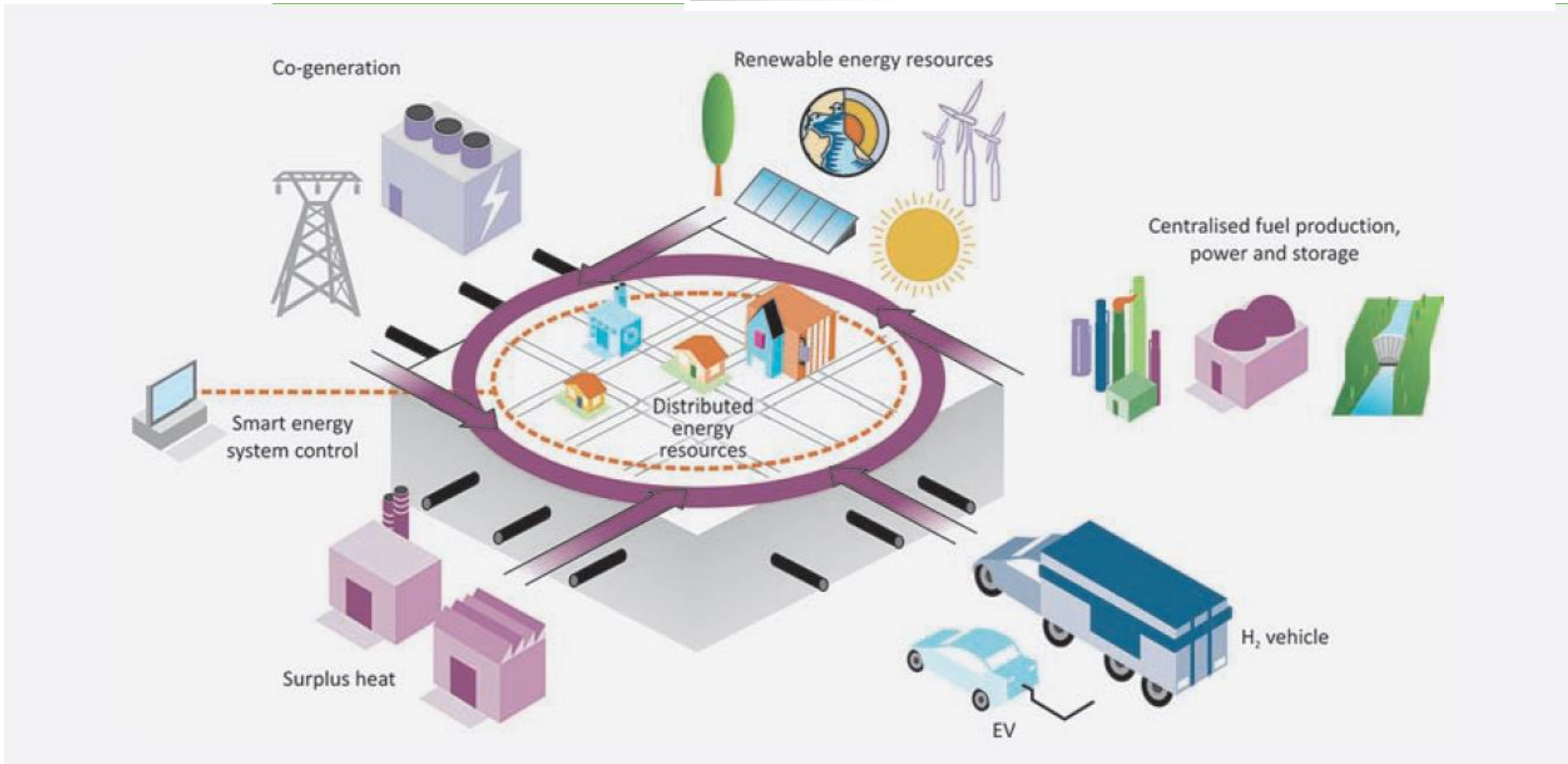
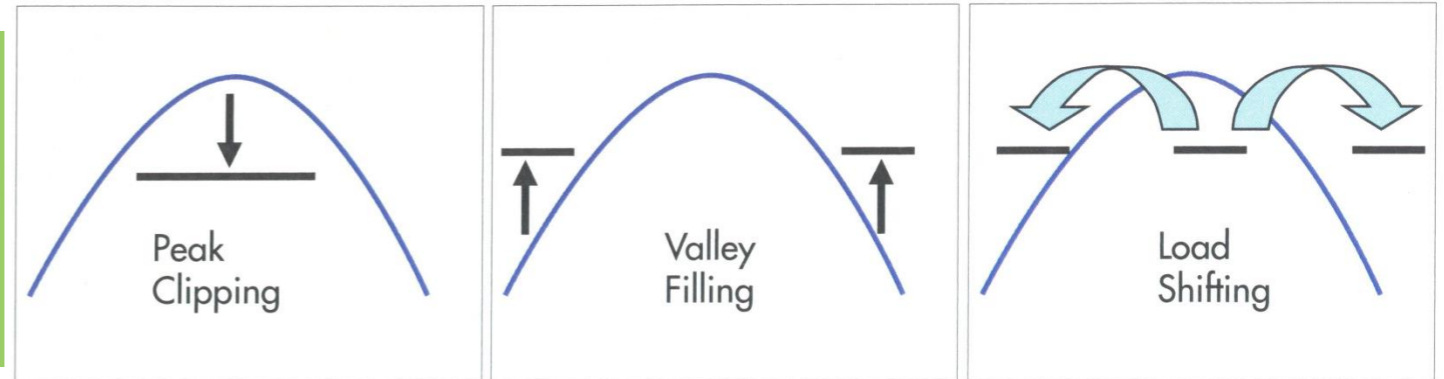


Output - Energy efficiency: the 'first fuel'

savings larger than the contribution of any other fuel to TFC in 2012



Demand response

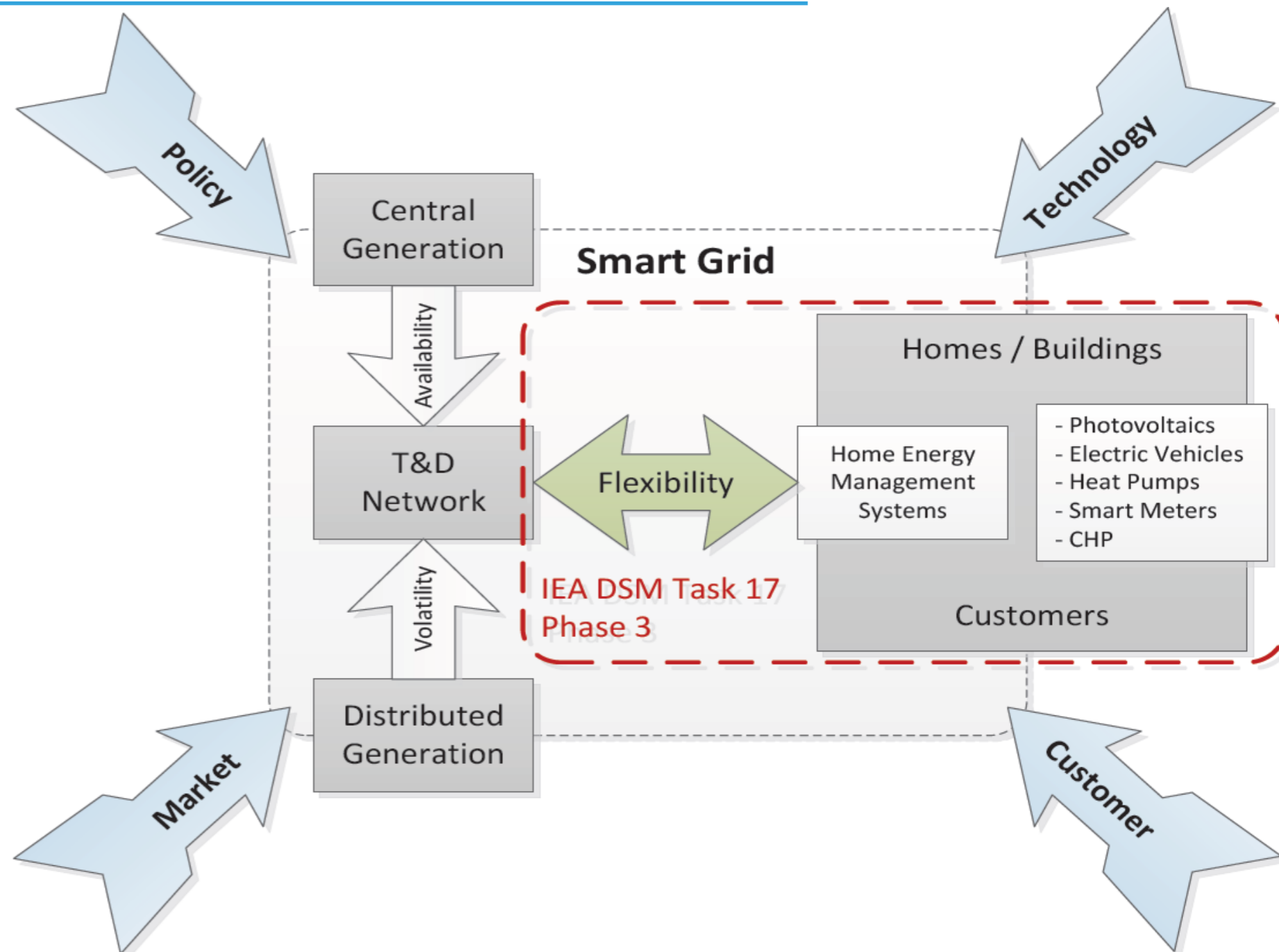


The energy system of the future will integrate the sources of and requirements for energy from all parts of the energy system

Some of the present work

INTEGRATION OF DSM, DISTRIBUTED GENERATION, RENEWABLE ENERGY SOURCES AND ENERGY STORAGE – PHASE 3

- Collaboration
 - TCP Isgan



Some of the present work

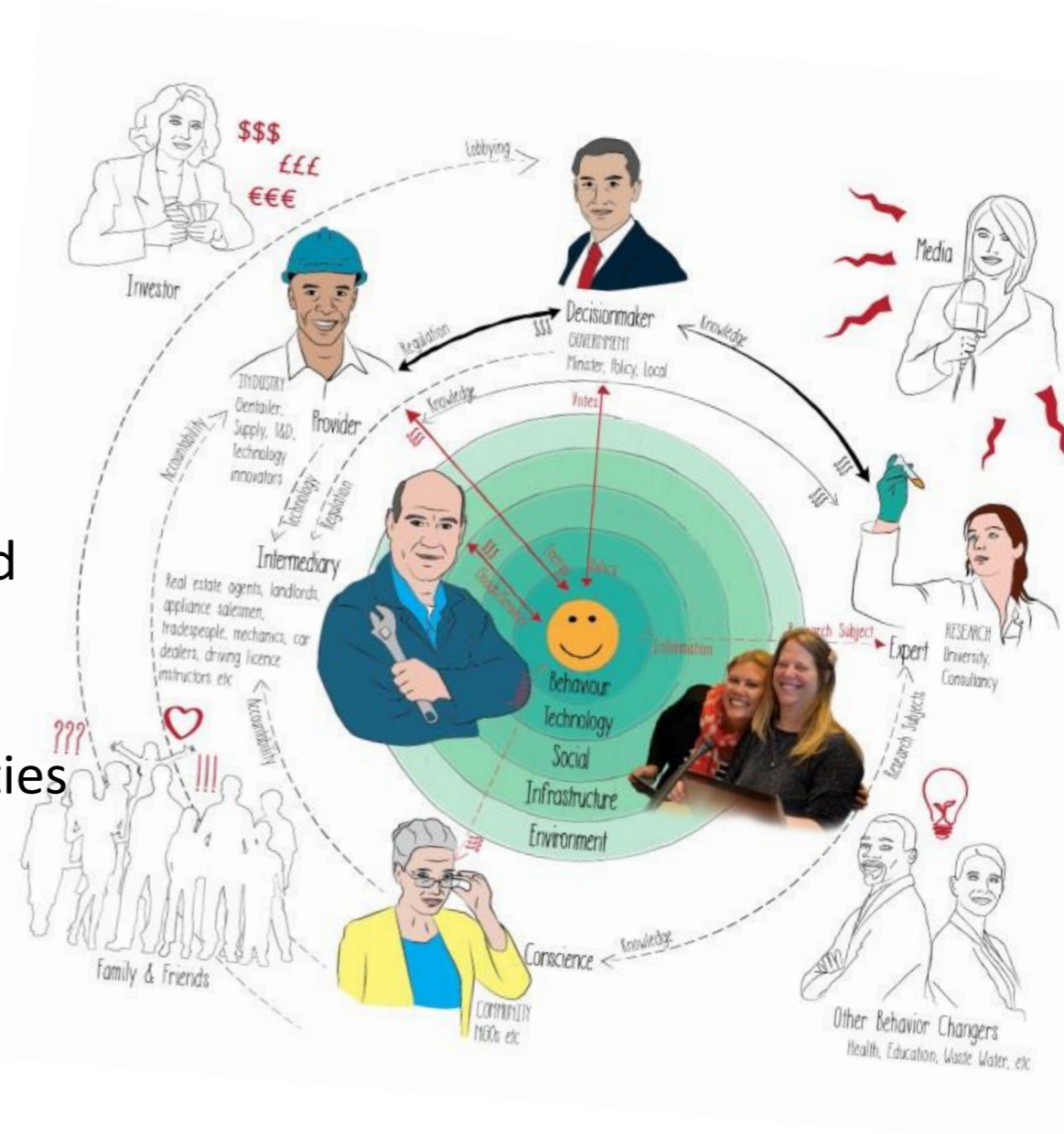
Innovative Energy Services

- Simplified M&V, Lessons learned for project & market development (e.g. 'Facilitators')

Helping the Behaviour Changers

Foster mutual engagement, collaboration and shared learning amongst Behavior Changers

- Backbone support to set a common agenda, measurement systems, mutually reinforcing activities
- Monitor and evaluate Behavior Change within EE projects



Just starting

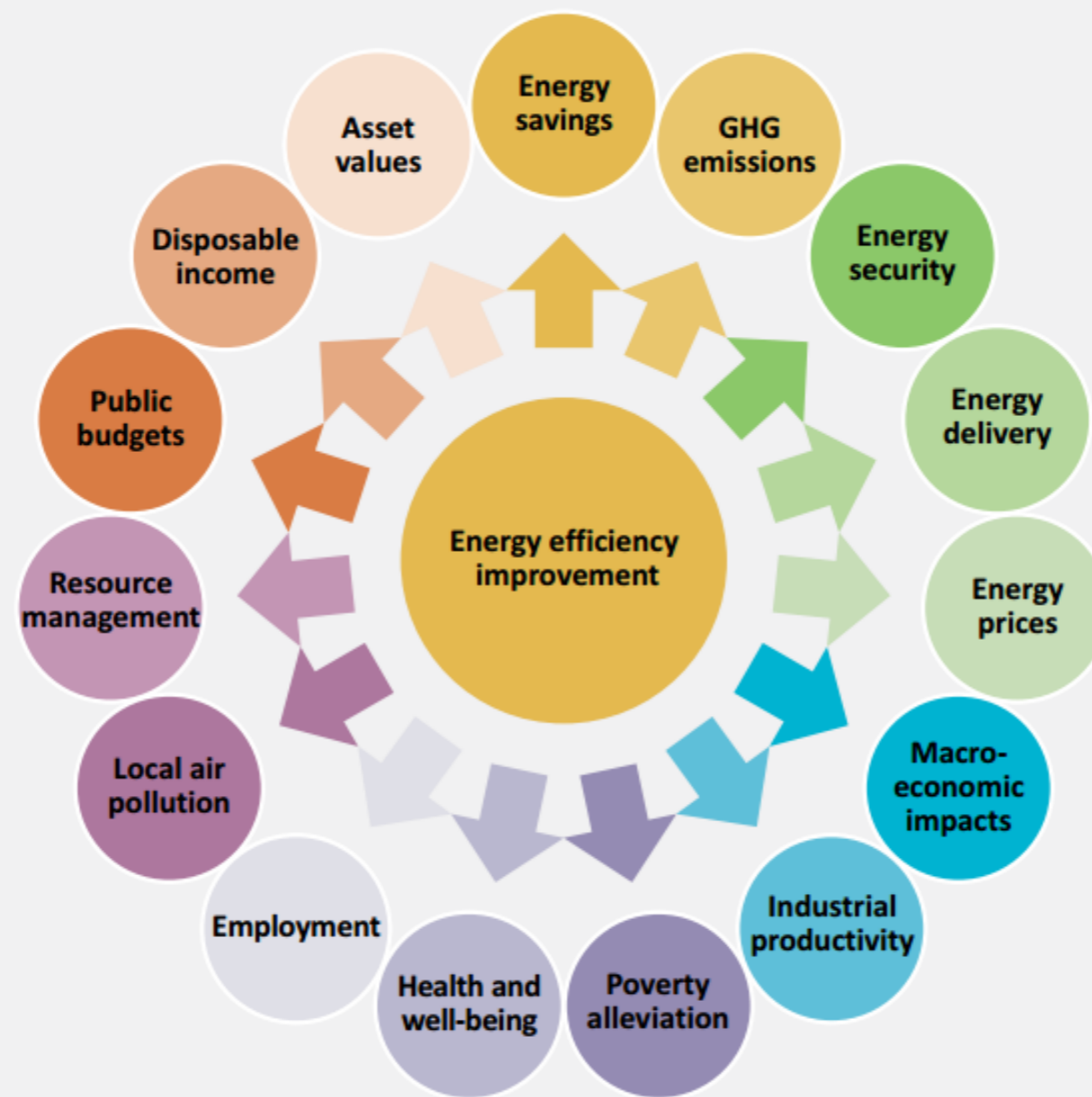
Business Models for a more effective market uptake of DSM energy services

- Identify proven and potentially successful business models for energy services for DSM on a national level, and develop effective policy strategies, stakeholder roadmaps and business models to upscale and mainstream these energy services on a national (ecosystem) level.

Multiple Benefits of Energy Efficiency

- Economic value of investment in sustainability (starting with Energy Efficiency)
- Based on IEA publication
- With IA IETS
- ... open for everyone to join!

Multiple benefits of Energy Efficiency



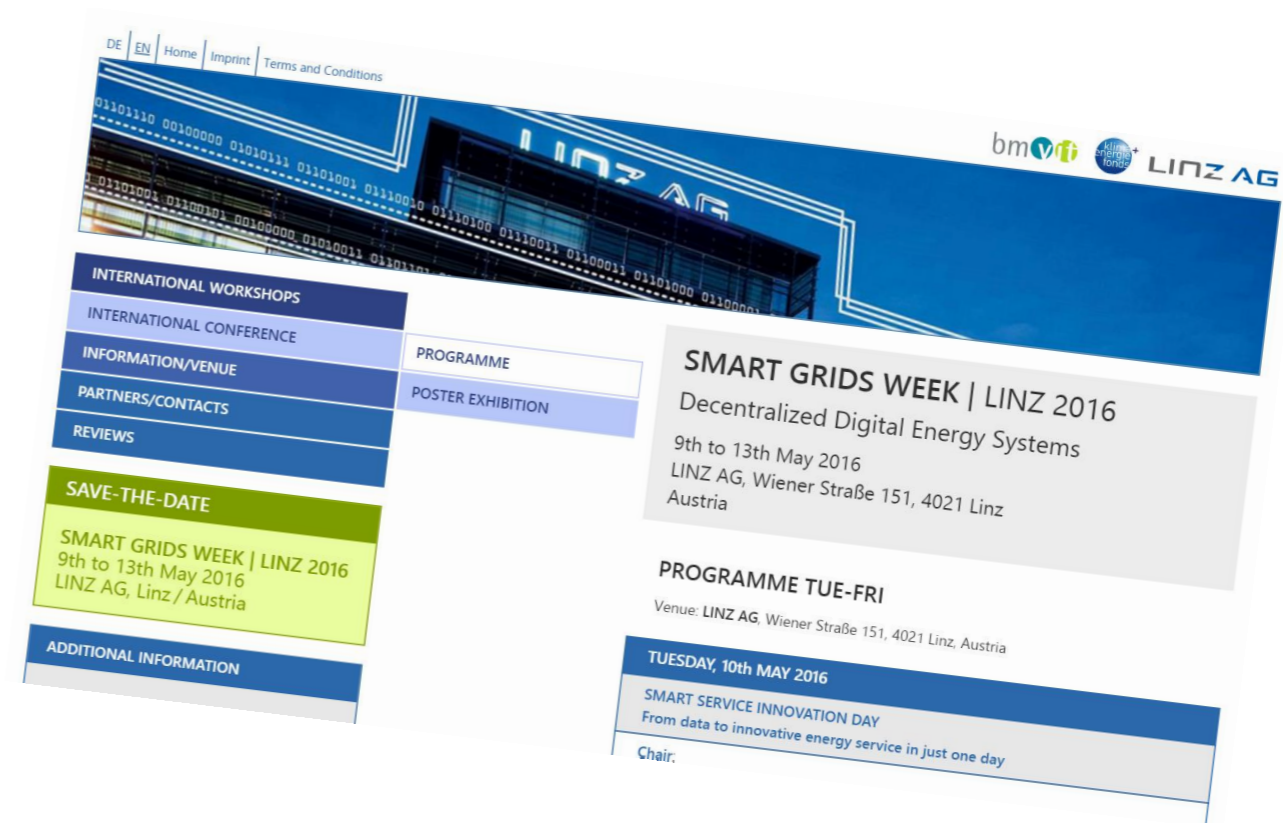
Note: This list is not exhaustive, but represents some of the most prominent benefits of energy efficiency identified to date.
Source: Unless otherwise noted, all material in figures and tables in this chapter derives from IEA data and analysis.

A multiple benefits approach to energy efficiency reveals a broad range of

potential positive impacts.

Towards Energy Efficiency: Our Challenge....

- Multidisciplinary approach (Finance, Technology, Social Sciences)
- More collaboration among TCP's: combine our strengths with new developments.
- Better links with policies.



And above all:

Involvement of consumers/end users: let's be the "Spotify" of Energy Efficiency.

Tanks for your attention

- www.dsm.org
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