Energy Efficiency 2019

Jeremy Sung

DSM Day, Bern, Switzerland, 3 March 2019

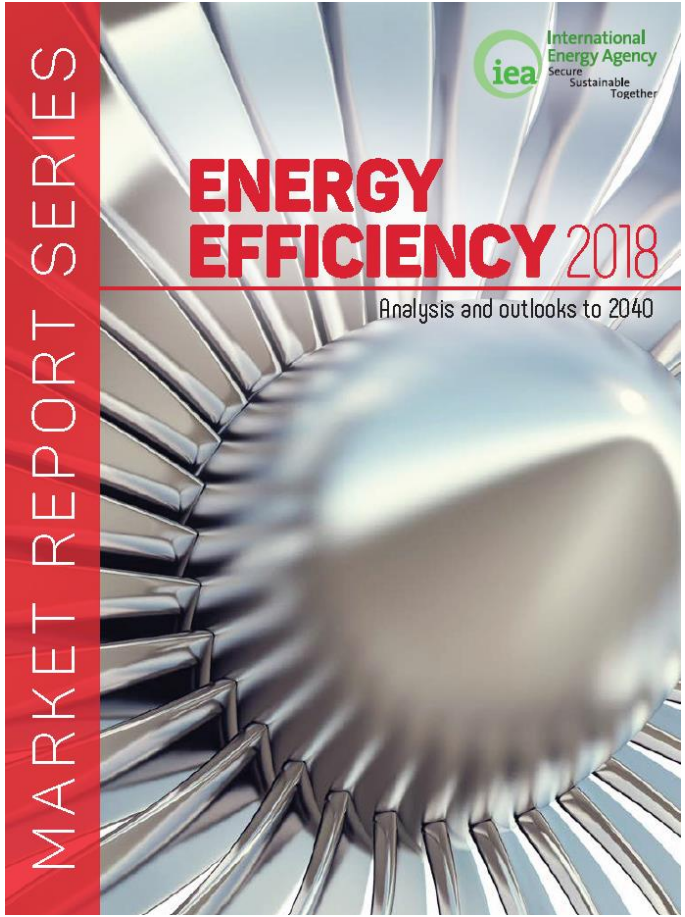
IEA

Contents

1. Recapping *Energy Efficiency 2018*
2. Overview of *Energy Efficiency 2019*
3. New content for 2019
4. Policies for digital efficiency
5. Q&A

Energy Efficiency 2018

Energy Efficiency 2018



- Released in October 2018
  - Chinese abridged version released 9 January 2019.
- Global trends and outlooks
- Sector chapters
  - Transport, Buildings and Industry
- Investment, finance and business models
- Energy Efficiency in Emerging Economies
  - Brazil, China, India, Indonesia, Mexico and South Africa
- Available for free from www.iea.org/efficiency2018

What does a more efficient world look like?

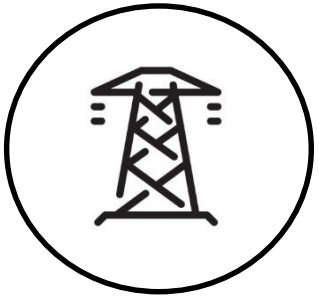
- The world is missing opportunities to improve energy efficiency, policy is not delivering the full potential gains that are available with current technology.

- The IEA's new Efficient World Scenario answers the question:

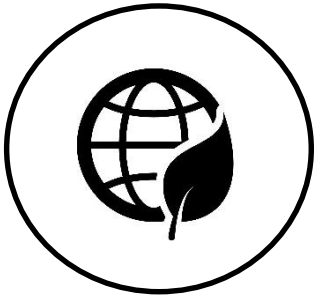
What would happen by 2040 if countries realised all the economically viable energy efficiency potential that is available today?

The Economy

The Energy System



The Environment



An Efficient World Strategy for 2040

Transport		**Energy demand could stay flat, despite doubling activity levels.**
Buildings		**Building space could increase by 60% for no additional energy use.**
Industry		**Value-added per unit of energy could double.**

Energy Efficiency 2019

Objectives for *Energy Efficiency 2019*

- Provide updated trends and analysis
  - Energy efficiency progress and impacts (decomposition analysis)
  - Policy (regulations, incentives and others)
  - Energy efficiency investment and finance

- Digitalise more content
  - Shorten the physical report, publish more content on http://iea.org/efficiency

- Explore emerging trends affecting efficiency, focussing on the question:

" What does digitalisation mean for energy efficiency and what can policy makers do to harness digitalisation for energy efficiency?"

Proposed report structure

Part I: Recent trends and "qualitative" short term outlook

- Global trends in energy use and intensity
- Impacts of efficiency
- Drivers of efficiency

Part II: Emerging trends: Digitalisation of efficiency

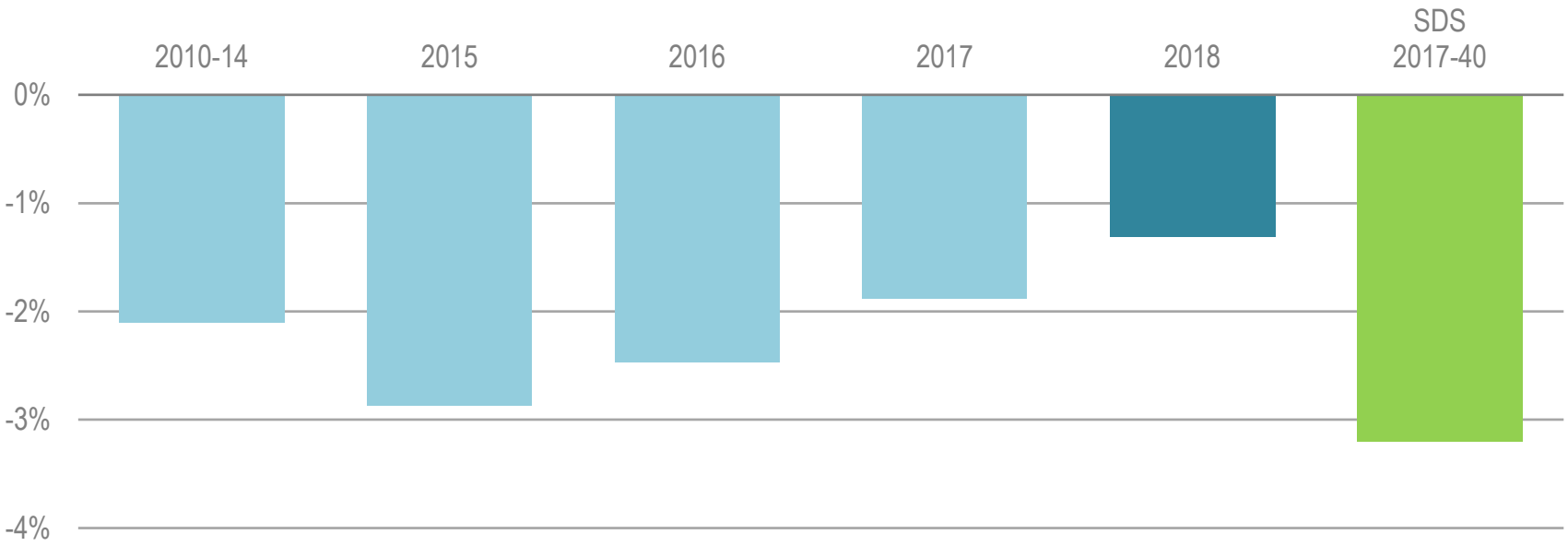
- Key technologies
- Business models
- Impacts

Part III: Policy options and recommendations

- Policy case studies: Successes and failures
- Examining policy readiness for digitalisation
- Recommendations

Sneak preview: Energy intensity improvements slowed again in 2018

Average annual change in primary energy intensity, historically and in the SDS



In 2018 energy intensity improved by 1.3%, half the rate of the period 2014-2016. Stagnant energy efficiency policy implementation and strong demand growth in more energy intensive economies contributed to this slowdown.

New content for 2019

New content for the 2019 report

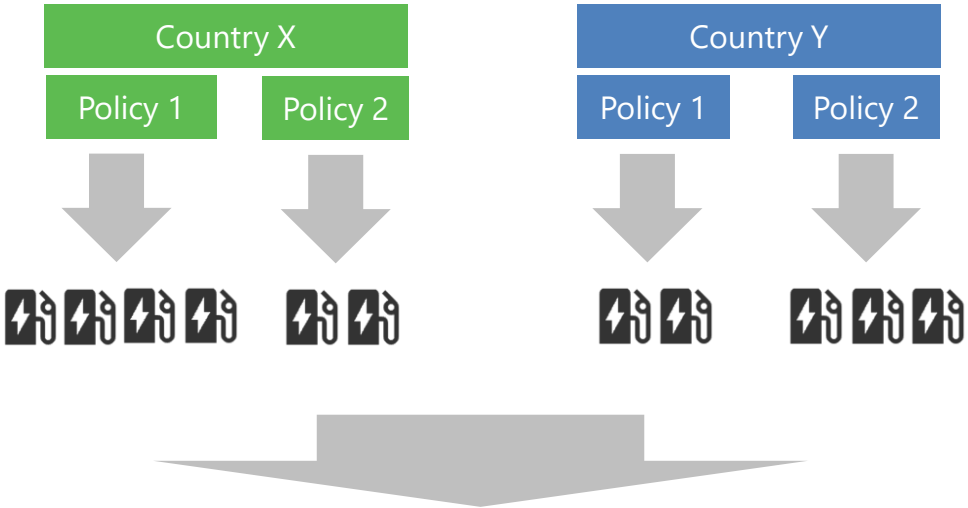
1. Policy impacts analysis – beyond energy and emissions savings

2. Tracking policies against the *Efficient World Strategy*

3. Policy framework to maximise the benefits of digitalisation for energy efficiency

1. Policy impacts analysis

- What technologies have been deployed or projects funded by financial incentives
- Want to answer **"What works and how much does it cost?"**



- Equipment installed and average cost by incentive type
- Number and type of projects funded etc.

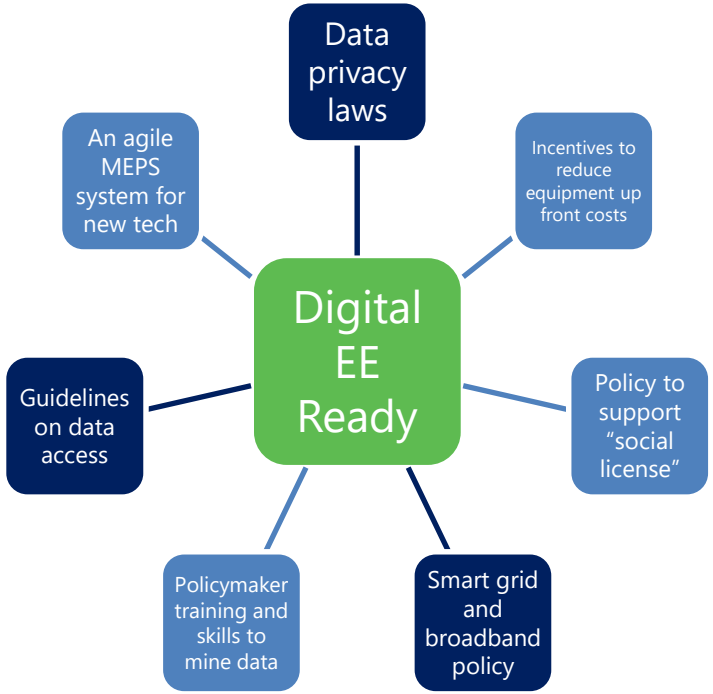
2. Tracking new policies against the *Efficient World Strategy*

- Purpose: To monitor implementation of recent and new policies against recommendations in the *Efficient World Strategy* from *Energy Efficiency 2018*.

		Regulatory (increase coverage/strength mandatory codes and standards)	**Financial incentives** (to push market towards best available tech)	**MBIs** (to grow market for efficiency and encourage investment)	**Information** (Expanded professional training and accreditation)
Country A	Policy 1	●			
	Policy 2	●			●
	Policy 3		●		
Country B	Policy 1		●		
	Policy 2			●	

3. Policy framework to maximise the benefits of digitalisation

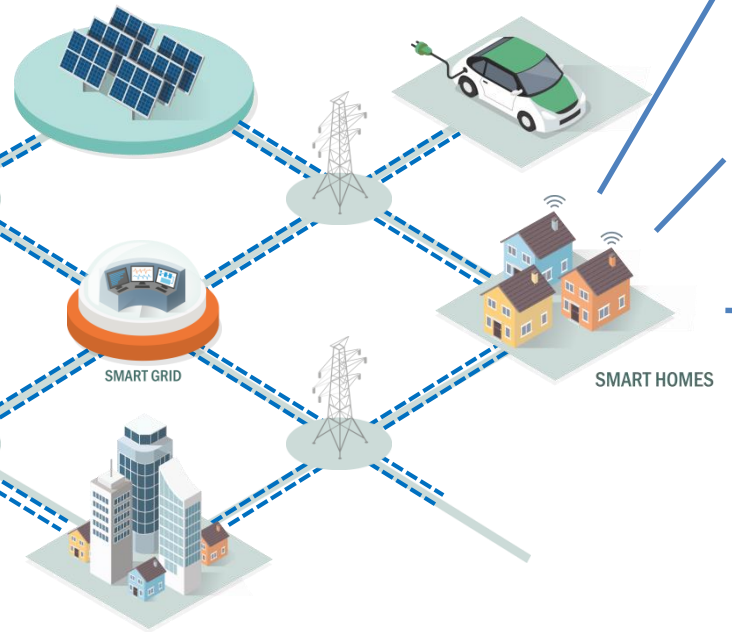
- Targeted at policy makers
- Seeks to answer: "*What policies are needed to maximise the potential efficiency benefits from digitalisation?*"
- Will build on existing work:
  - *Going Digital Integrated Policy Framework* (OECD, 2019)
  - *No regrets policy recommendations for digitalisation and energy* (IEA, 2017)



Case study

Policies to support smart homes

Case study: Policies to support smart homes



Do households trust smart meters?

Are the right data privacy laws in place?

Under existing energy market rules, are P2P trading and demand response permitted?

Are policies in place to support ESCOs?

Are there standards for standby / network power consumption?

Can low income households afford new smart devices?

Is there universal access to broadband internet?

Digitalisation policy case studies needed

- Case studies demonstrating:

1. Policies that have **enabled** the roll-out of digital technologies to improve energy efficiency?

2. Policies that have **prevented** roll-out of digital technologies to improve energy efficiency?

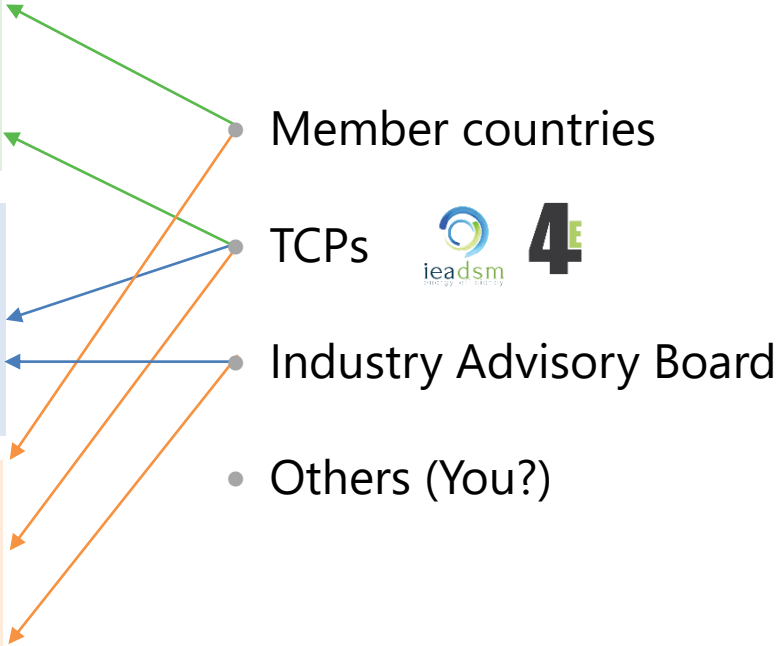
A policy framework to maximise the energy efficiency benefits from digitalisation

Contributors

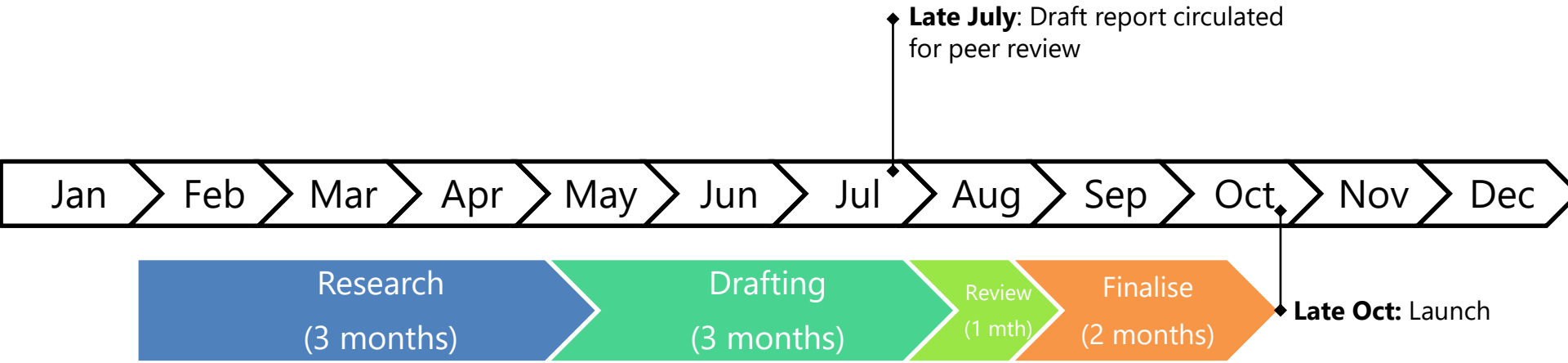
Part I: Recent trends and "qualitative" short term outlook

Part II: Emerging trends: Digitalisation of efficiency

Part III: Policy options and recommendations



Report timeline



Contact details:

Jeremy Sung
jeremy.sung@iea.org

www.iea.org

IEA