Efforts to realize the untapped potential of energy efficiency

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Outline

1. Introduction
2. Potential for Energy Efficiency
3. National efforts – example of Australia
4. International efforts – example of the G20
5. Key elements for success
Introduction: About IPEEC

- **IPEEC**: International Partnership for Energy Efficiency Cooperation
- 16 countries of the G20
- Global response
- Benefits of international cooperation

![Pie chart showing countries and their contributions](chart.png)
Huge potential for energy efficiency

Today

- Trend in Greenhouse Gases
- Change Behavior
- Energy Efficiency
- Renewable Energy
- Improved Carbon Sinks

Low Carbon Path

Tomorrow
Huge potential for energy efficiency

G20 countries account for more than 85% of the energy efficiency savings

Source: IEA, World Energy Outlook Analysis
Huge potential for energy efficiency

- improves productivity
- allows more people to gain greater comfort
- increases energy security
- creates jobs
- improves air quality
- strengthens public budgets
- leverages inward investment
- increases speed and comfort of transport and freight
National efforts – Australia

COST EFFECTIVE ENERGY EFFICIENCY OPPORTUNITIES

Source – ClimateWorks data with departmental analysis
National efforts – Australia

National Energy Productivity Plan (NEPP)

Improving Australia’s energy productivity means more value from the energy we consume.

Energy productivity = \frac{\text{economic output (GDP)}}{\text{energy used (PJ primary)}}

**WHY improve energy productivity?**

- Boosting competitiveness and growth
- Helping families and business manage their energy costs
- Reducing greenhouse gas emissions

**WHAT are our goals?**

- Energy systems that deliver least cost energy in the long term interests of consumers
- More informed energy consumers managing their energy hills
- Energy efficiency
- Energy market reform

**HOW will we get there?**

- Encouraging more productive consumer choices through
  - efficient incentives
  - empowering consumers
  - helping business compete
- Promoting more productive energy services through
  - innovation support
  - competitive modern markets
  - consumer protections
# National Energy Productivity Plan - Measures

This work plan covers the first steps in the 15 year life of the NEPP and will be continuously updated. A range of metrics to measure outcomes will be developed and reported annually.

- New COAG Energy Council
- New Commonwealth
- New all-governments

## Encouraging more productive consumer CHOICES

### EFFICIENT INCENTIVES
- Transition to cost-reflective pricing
- Market mechanisms to capture societal benefits

### EMPOWERING CONSUMERS
- Make choice easier
- Support best practice services for vulnerable consumers
- Improve residential building energy ratings and disclosure

### HELPING BUSINESSES COMPETE
- Help business self-manage energy costs
- Recognise business leadership and support voluntary action
- Research business benchmarks and success factors
- Expand commercial building ratings and disclosure
- Improve fuel efficiency in aviation and maritime sectors
- Reduce barriers to financing
- Improve energy productivity in government

## Promoting more productive energy SERVICES

### INNOVATION SUPPORT
- Support innovation and commercialisation
- Improve light vehicle efficiency
- Drive innovation in transport and infrastructure systems
- More liveable, accessible and productive cities
- Promote leading practice
- Collaborate internationally

### COMPETITIVE MODERN MARKETS
- Emerging technologies in the electricity system
- Deliver a Gas Supply Strategy
- Reform governance to keep pace with change
- Develop an Energy Use Data Model for better planning
- Competitive smart meter rollout
- Improve the exchange of market data
- Build service provider capacity
- New market mechanisms for demand response
- Promote competitive retail markets in electricity and gas
- Monitor the wholesale market
- Adopt National Frameworks

### CONSUMER PROTECTIONS
- Deliver a new Equipment Energy Efficiency (E3) prioritisation plan
- Advance the National Construction Code
- Improve compliance with building energy efficiency regulation
- Review the National Energy Customer Framework for disruptive technologies
- Review Fuel Quality Standards Act
International efforts – an example, the G20

G20: Huge economic, demographic and energy weight

G20 COUNTRIES PRODUCE 73 PER CENT AND CONSUME 83 PER CENT OF THE WORLD’S ENERGY
International efforts – an example, the G20

2014 Action Plan: transport, networked devices, finance, buildings, industry, electricity generation

2015 Implementation
International efforts – an example, the G20

2016 Energy Efficiency Leading Programme

2016 年二十国集团中国峰会
International efforts – an example, the G20

Long-term
Comprehensive
Flexible
Adequately resourced
A unique opportunity
Elements for successful Energy Efficiency

1. Information
2. Technologies
3. Know how
4. Finance

Vision
Dedicated Staff
Work plan
1. The potential to meet the world’s and this region’s energy needs through improved energy efficiency is huge.

2. Energy efficiency can become the first fuel provided the policies in place are: long-term; comprehensive; flexible and adequately resourced.

3. This can help boost energy efficiency technologies, services and applications.
In 2015, Zoe was detached from the Australian Government to IPEEC to assist in implementing the G20 Energy Efficiency Action Plan. Prior to this, she worked on international and domestic energy issues focusing on energy efficiency – within the Federal Department of Climate Change. She started her career in low-carbon technologies, working for a Brussels-based startup company.