

Bringing Energy Efficiency to COP21: Lessons from G20 Achievements

By Benoit Lebot

Executive Director of the IPEEC Secretariat

www.ipeec.org



Overview

- Introduction: IPEEC
- The G20 & the G20 Energy Efficiency Action Plan
- Outcomes in 2015
- Possible contributions to COP21
- Outlook for China G20

IPEEC Members are Major Economies



Canada



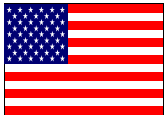
France



Japan



Russian
Federation



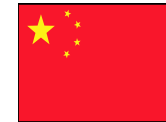
USA



United
Kingdom



European
Union



China



Mexico



Germany



India



South
Korea



Brazil



Italy

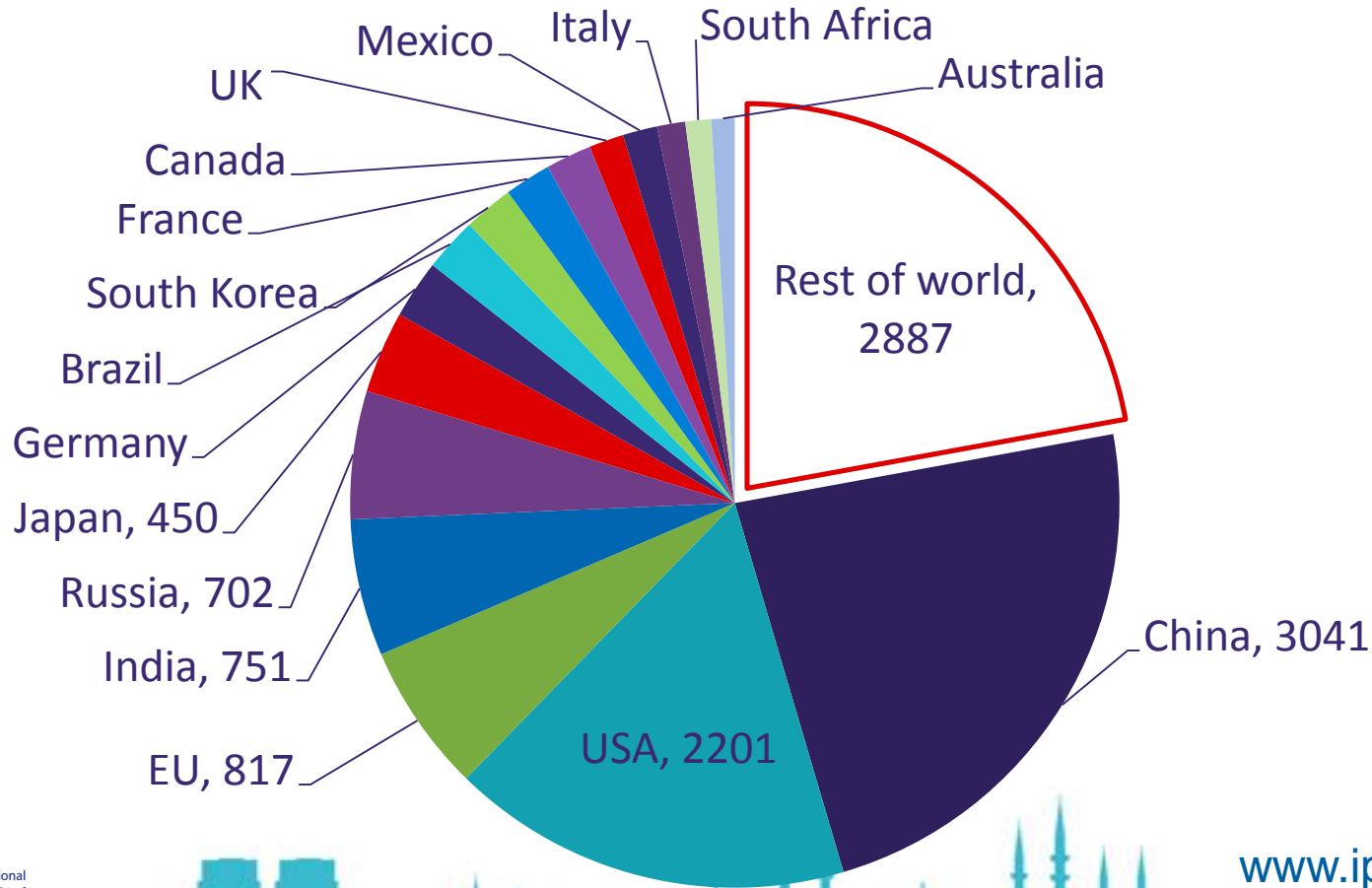


South
Africa



Australia

IPEEC Member Countries Constitute >75% of World Energy Consumption

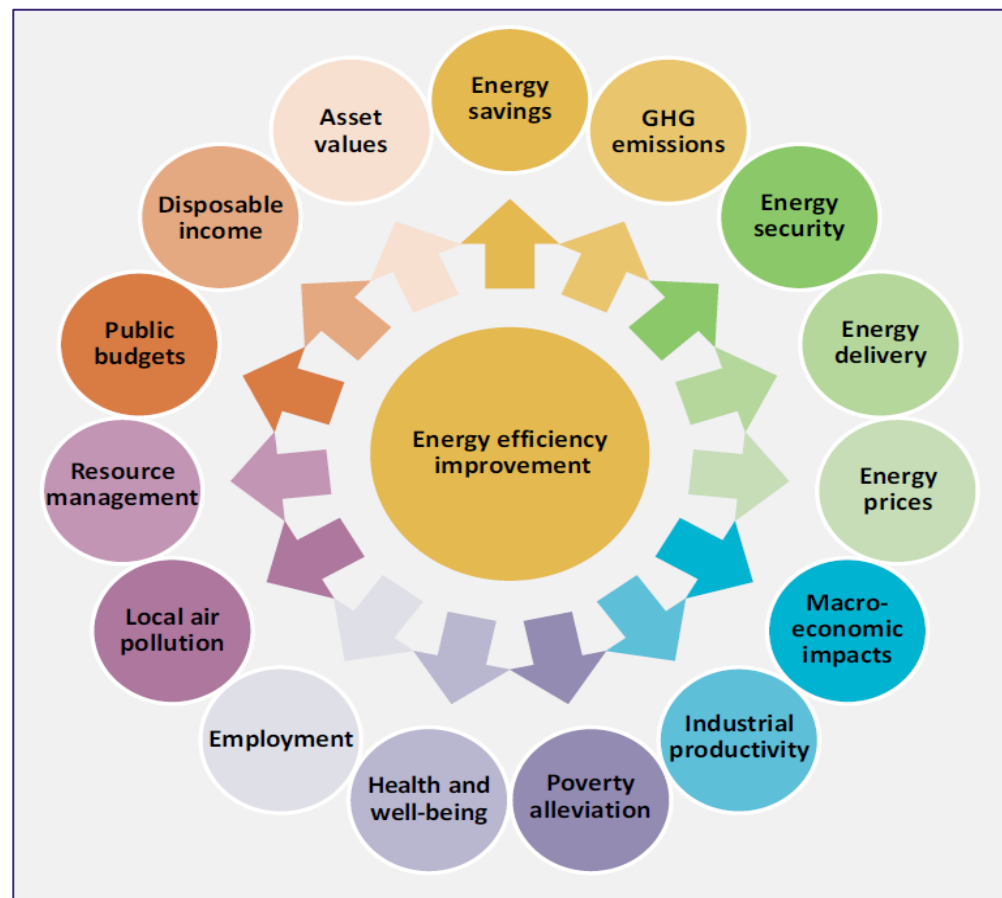


IPEEC's Vision

A world where key national policymakers view energy efficiency (EE) as a resource and implement cost effective policies to promote it.

Why care about energy efficiency?

- Much more than just an energy issue
- ‘First fuel’ with multiple benefits



Why bother with international collaboration?



- Sharing of best practices and technical cooperation
- Work together to have an impact

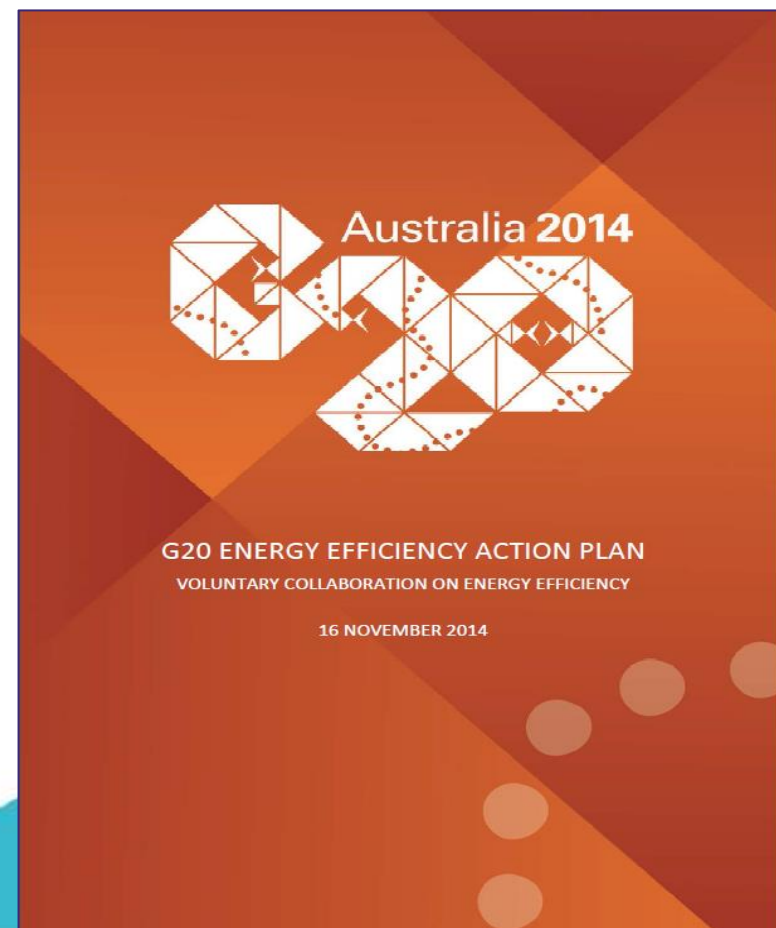
Why the G20?

- Political, economic and demographic weight
- Attractive 'G20' label



The G20 Energy Efficiency Action Plan

- Opportunity for G20 action
- Benefits of Voluntary Collaboration
- 6 Individual work-streams



Outcomes in 2015

- Implementation of the Action Plan
- Collaboration among countries
- Processes and consultation









Report on the G20 Energy Efficiency Action Plan Voluntary Collaboration on Energy Efficiency

Report to the G20
on 2015 Outcomes of Work Streams



Areas of Work

 <p>Transport Motor Vehicles</p>	 <p>Products Networked Devices</p>	 <p>Finance Enhancing Capital Flows</p>	 <p>Buildings Improving Metrics & Performance</p>	 <p>Industrial Energy Management</p>	 <p>Electricity Generation</p>
--	--	---	---	--	--

1. FINANCE

Enhancing capital flows to energy efficiency investments



Energy Efficiency Investment Opportunity

- Multiply energy efficiency investments by a factor of **5 to 8** to deliver multiple benefits and policy targets



Achievements in 2015

- Consulted with over 180 experts in 5 workshops across the world to identify solutions to key issues.
- Published 2015 Activity Report including policy options backed by 12 country case studies.



Achievements in 2015

- Developed proposed **G20 Energy Efficiency Investment Principles** that provide voluntary guidance to help G20 nations deliver greater benefits from energy efficiency investments in their economies.

Proposed G20 Energy Efficiency Investment Principles

1. Recognise Importance of Energy Efficiency as an Economic and Development Priority
2. Encourage countries to consider both supply and demand side investments in a balanced way



Proposed G20 Energy Efficiency Investment Principles

3. Country-level review of measures and policies that stimulate demand for energy efficiency investments
4. Collaboration to unlock barriers that prevent the supply of finance for energy efficiency investments



Proposed G20 Energy Efficiency Investment Principles

5. Build Capacity within Public and Private Financial Institutions for Energy Efficiency Investments.



Proposed Way Forward

- Create a policy framework that enables energy efficiency investments
- Promote proposed G20 Energy Efficiency Investment Principles
- Continue to work closely with financial institutions and countries and showcase best practices and innovative case studies

2. NETWORKED DEVICES



2. Networked Devices

- 300 private and public organizations
- Awards for achievements
- A common goal
- Guiding principles
- Centre of excellence



Achievements in 2015



- Launched Connected Devices Alliance:
Network of 300 organisations, 19 governments
- Extensive dialogue between industry and governments:
3 workshops, 26 conference calls



Recommendation 1

Initiated 7 key projects to support one common goal

- Recognise the need to take globally coordinated action to:

Maximise network enabled energy savings and minimise the energy consumption from all networks and network connected devices.

Recommendation 2

- Encourage further work with the Connected Devices Alliance to expand and build upon the progress made by the Task Group in 2015.

A small blue icon of a lightbulb inside a square frame, positioned to the left of the title.

Proposed Way Forward

- Develop specific Voluntary Targets
- Develop Methodologies to measure savings
- Promote Principles for Energy Efficiency Devices
- Promote and populate the Centre of Excellence
- Launch Recognition Awards
- Encourage voluntary Protocols & Standards
- Identify Policy options to stimulate Intelligent Efficiency

3. TRANSPORT

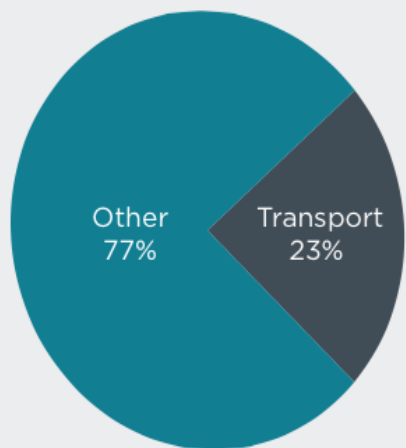
Motor Vehicles



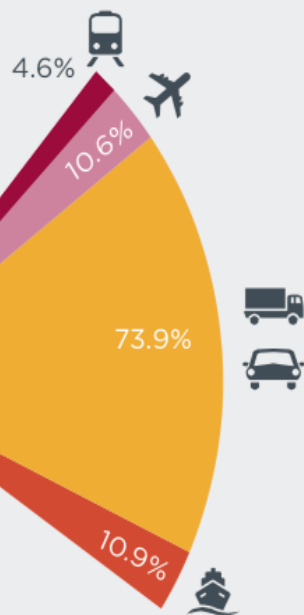
THE TRANSPORT SECTOR

A major contributor to global anthropogenic CO₂ emissions

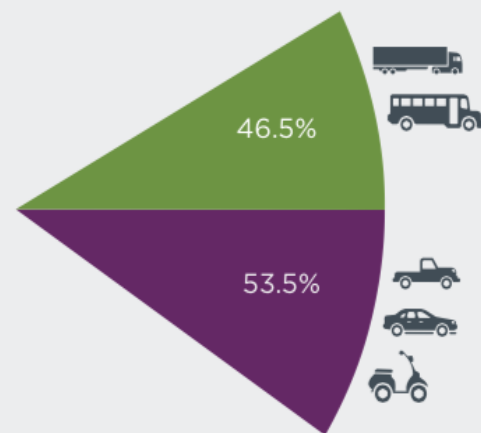
GLOBAL ANTHROPOGENIC EMISSIONS
≈ 38 GtCO₂



TRANSPORT EMISSIONS
≈ 8.8 GtCO₂



ROAD TRANSPORT EMISSIONS
≈ 6.5 GtCO₂



LEGEND

RAIL

AVIATION

ROAD

MARINE

HEAVY-DUTY VEHICLES

LIGHT-DUTY VEHICLES



Achievements in 2015

- Published 2 reports on efficiency opportunities in heavy and light duty vehicles in G20
- Exchanged best practices on relevant national standards
- Conducted outreach to G20 countries



Recommendation 1

- Acknowledge and endorse the proposed policy options that aim to improve G20 countries' vehicle energy efficiency and emissions performance



Recommendation 2

- Policy roadmaps for Heavy Duty Vehicles action by September 2016



Proposed Way Forward

- Conduct survey of G20 nations to help develop Policy Roadmaps
- Provide training & experiences sharing on policy design and implementation
- Engage actors from the Global Financial Community

4. BUILDINGS

Improving Metrics & Performance





Delivering Energy Savings in Buildings

International Collaboration
on Building Energy Code Implementation

IPEEC Building Energy Efficiency Taskgroup



Building Energy Performance Metrics

Supporting Energy Efficiency Progress in Major Economies

BUILDING ENERGY EFFICIENCY TASKGROUP



Building Energy Codes Portal



Lab Pages

[Country Information Sheets](#)

[Directory of Experts](#)

[Supporting Resources](#)

www.ipeec.org/beet.html



Recommendation 1

- Commit to improving the way countries implement building energy codes and track building sector energy metrics.





Recommendation 2

- Accelerate improvements in energy performance by exchanging building energy code practices and experiences through the new BEET codes portal.





Proposed Way Forward

- Codes: Systems and tools for compliance checking, performance measurement.
- Metrics: Improve data quality, develop and track additional metrics, model future energy use.

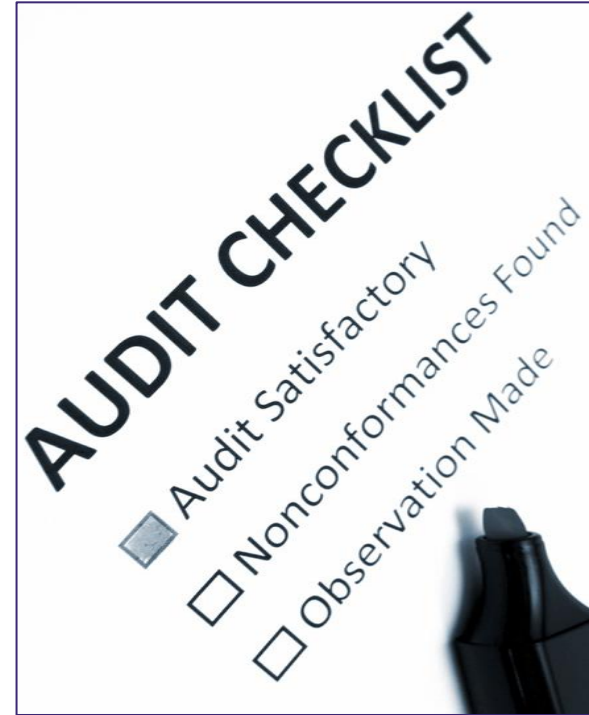
5. INDUSTRIAL ENERGY MANAGEMENT





Industrial Energy Management

- New certification scheme
- Policy exchanges and case studies
- New initiative ISO 50001 Collaborative





Industrial Energy Management

- Established a global certification scheme for energy management standards
- Policy Exchanges and Case Studies
- New initiative: *ISO 50001 Collaborative*
- Workshops on energy efficiency in SMEs and ESCOs

A blue silhouette icon of a factory with three chimneys.

Recommendations

- Encourage use by industry of energy management practices, focus: ISO 50001
- Exchange approaches to increase use of standards for energy management systems
- Continue policy exchanges to overcome barriers to energy management practices



Proposed Way Forward

- Define key principles to promote international standards for energy management (E.g. ISO50001)
- Measure progress of deployment of standards globally
- Facilitate cooperation between industry energy managers, technical experts and policy makers

6. ELECTRICITY GENERATION

High Efficiency Low Emission



Electricity Generation



A yellow triangular warning sign with a black border and a black lightning bolt symbol inside.

Achievements in 2015

- Workshop on Clean Coal Technology (Istanbul, 25 May)
- Workshop on policies, finance and technologies for HELE (Ankara, 30 July)
- Site-visit (Çayirhan Thermal Power Plant, 28-29 July)

A yellow triangular warning sign with a black border and a black lightning bolt symbol inside, indicating a warning or hazard.

Recommendations

- Encourage HELE where fossil fuels continue to be a major source of electricity generation.
- Support Research, Development and Demonstration.
- Collaboration on technical and financial barriers and solutions.

A yellow triangular warning sign with a black border and a black lightning bolt symbol inside.

Proposed Way Forward

- Promote best available HELE technologies
- Expand a new research and study project for developing a common basis to measure CO₂ emission reductions by improved operation and maintenance practices

Contributions to COP21

- Emission reductions
- Countries working together have the political will and can make a difference
- Continued collaboration



Extract from G20 Energy Ministers Communiqué 2 October 2015, Istanbul

Energy Efficiency

7. We recognize the benefits of energy efficiency, including lower costs for households and businesses, greater economic productivity and growth, strengthened energy security, and improved environmental outcomes. We acknowledge the need for substantial improvement in countries' energy efficiency performances. We therefore welcome the important progress achieved in 2015 in the implementation by participating countries of the G20 Energy Efficiency Action Plan: Voluntary Collaboration on Energy Efficiency. We note/adopt the Report on the Voluntary Implementation of the Energy Efficiency Action Plan prepared by the International Partnership for Energy Efficiency Cooperation (IPEEC) in cooperation with other international organizations and participating countries of the workstreams. We agree to further support the existing workstreams on finance, products, buildings, transport, industry and electricity generation, as well as other new priorities to be identified in the future. Participating G20 countries of the relevant workstreams undertake to improve energy efficiency benefiting from the outcomes of that particular workstream such as the recommendations on Energy Efficiency Investment Principles and the recommendations on vehicle energy efficiency and emissions performance.

Extract from G20 Summit Communiqué 15 & 16 November 2015, Antalya

23. We recognize that actions on energy, including improving energy efficiency, increasing investments in clean energy technologies and supporting related research and development activities will be important in tackling climate change and its effects. (...). We also highlight the progress made this year by participating countries in taking forward our **collaboration on energy efficiency** and agree to further support on a voluntary basis the 2015 outcomes of existing work streams on efficiency and emissions performance of vehicles, particularly heavy duty vehicles, networked devices, buildings, industrial processes and electricity generation, as well as financing for energy efficiency.



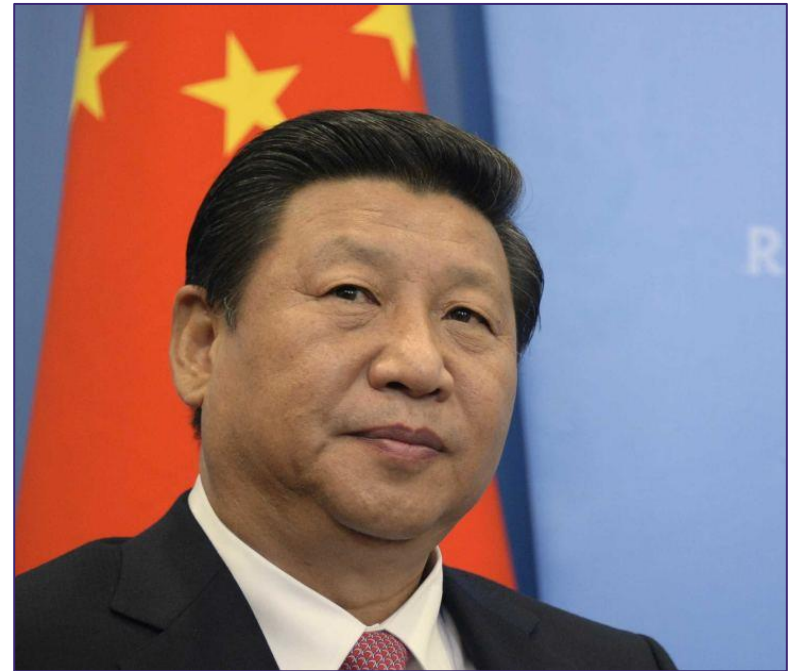
Extract from G20 Summit Communiqué 15 & 16 November 2015, Antalya

24. **Climate change** is one of the greatest challenges of our time. We recognize that 2015 is a critical year that requires effective, strong and collective action on climate change and its effects. We reaffirm the below 2°C goal as stated in the Lima Call for Action. (...) Our actions will support growth and sustainable development. We affirm that the Paris agreement should be fair, balanced, ambitious, durable and dynamic. We underscore our commitment to reaching an ambitious agreement in Paris that reflects the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances. (...).



Outlook for China G20

- Energy efficiency :
A priority
- Working closely with
China



Thank You

www.ipeec.org

E-mail: contact@ipeec.org

Tel: +33 (0)1 40 57 65 24

