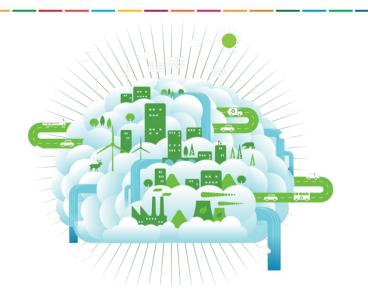




- 1966 - 2016 ----

UNIDO Industrial Energy Efficiency Programme



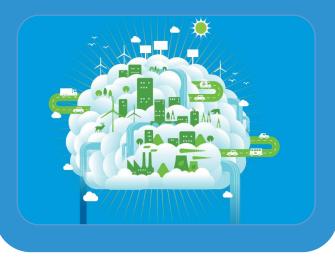




UNIDO's Mandate: Inclusive & Sustainable Industrial Development (ISID)

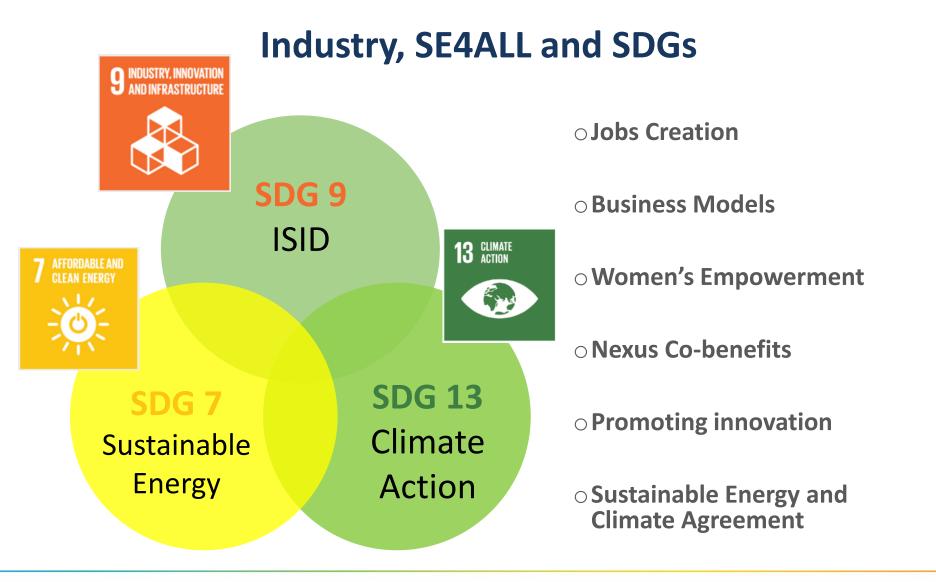


Achieving **equitable** & **sustainable** social, economic and environmental growth while mainstreaming women and youth.













Industry, Energy and Climate Change

Global Primary Energy Demand by 2030: 50% increase expected • 87% from non-OECD countries (industry biggest user) Single largest source of GHG emissions: 32% of global emissions

Source: IEA, Technology Transitions for Industry, 2009

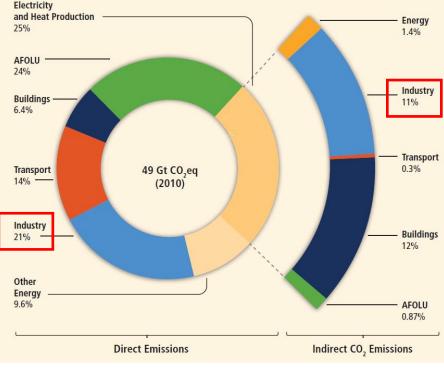
Industry accounts for 1/3 of **global energy use:** • 40% of electricity • 77% of coal & derivatives • 37% of natural gas





Industry, Energy and Carbon Footprint

- Industry is responsible for 40% of global final energy consumption (IEA, 2015)
- Industry is the single largest source of GHG emissions, accounting for about 32% of global emissions
- Over last two decades industry emissions have largely grown in Lower and Upper Mid Income Countries



Source: IPPC Working Group III – Mitigation of CC, 2014

Greenhouse Gas Emissions by Economic Sectors

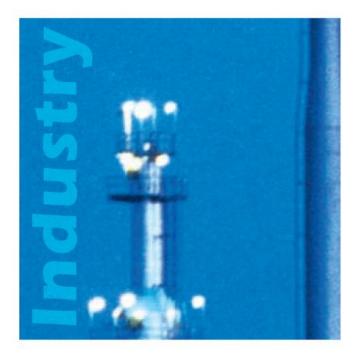




Industrial Energy Efficiency – What can we do?

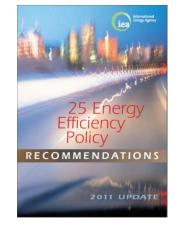
Different Barriers and Goals require Different Measures!

IEA Energy Efficiency Policy Recommendations



Industry

21 Energy management



- High-efficiency industrial equipment and systems
- B Energy efficiency services for SMEs
- 4 Complementary policies to support industrial energy efficiency

Source: IEA 2011





Objectives of the UNIDO IEE Programme

Work together with counterparts, stakeholders and partners to:

- Strengthen policy and regulatory frameworks for better & sustainable EE performance in industry
- Accelerate adoption and wide dissemination of IEE best-available practices and technologies
- Save energy and reduce GHG emission of the industrial sector
- Integrate EE in industry daily business practices for increased productivity and competitiveness







UNIDO IEE Programme – Thematic Areas

HUMAN

POLICIES

- Co-operative measures
- ✓ Financial/fiscal/TA incentives
- New Market-based Instruments
- Information/Education/Training
- ✓ Legislative
- ✓ Recognition
- E-transport
- Cross-cutting
- Process technologies
- Energy Efficient Design
- Energy Systems Optimization
- Energy Management Systems

TECHNOLOGIES

STANDARDS

- ISO 50001 EnMS 🗸
- Minimum Energy Performance ✓
 - Conformity Assessment 🗸
 - EN/ISO Energy Audits 🗸
 - EN Benchmarking ✓

 CAPITAL
 Supply Chain ✓

 EE business models ✓
 EE business models ✓

 Financing mechanisms ✓
 ✓

 EE Knowledge Networks ✓
 ✓

 on
 Equipment vendors/suppliers ✓

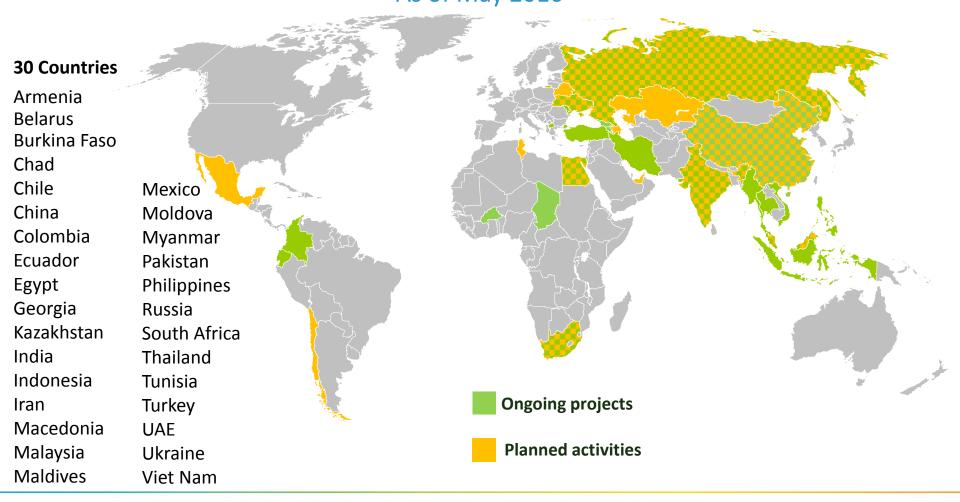
 ms
 National Energy Eff. Agencies ✓

DELIVERY MECHANISMS





UNIDO Industrial Energy Efficiency Portfolio As of May 2016







Summary of Achievements (9 countries)

- 303 UNIDO Qualified EnMS Experts
- 271 Enterprises with EnMS implemented
- 5,183 energy efficiency practitioners and enterprise personnel received training in EnMS
- Average annual energy savings of **7mil** MWh
- Annual CO2 emission reductions of *4 mil* tCO2
- Annual savings of \$132 mil without considering nonenergy benefits

NOTE: Please do not quote these numbers because analysis has not been completed yet





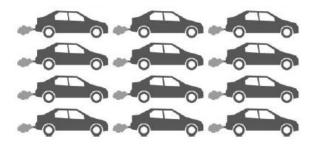
How much energy is 7,000 GWh?



Annual energy consumption of 1,150,000 EU households



Annual energy production of 2,000 MW of installed wind power



CO2 emissions of 1,750,000 middle class cars (running 12,500 km per year)

Annual cost savings of USD 80mil without considering non-energy benefits

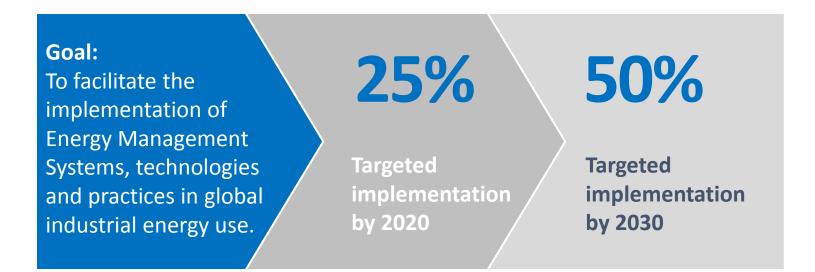
Annual CO2 emission reductions of 4.3 million tCO2





SE4ALL: Industrial Energy Efficiency Accelerator

The IEE Accelerator is a global collaborative platform and network of businesses, international organizations and NGOs that will provide tools, expertise, technical capabilities and financial capacity to partners to contribute and make commitments for accelerating the improvement rate of energy efficiency in Industry.







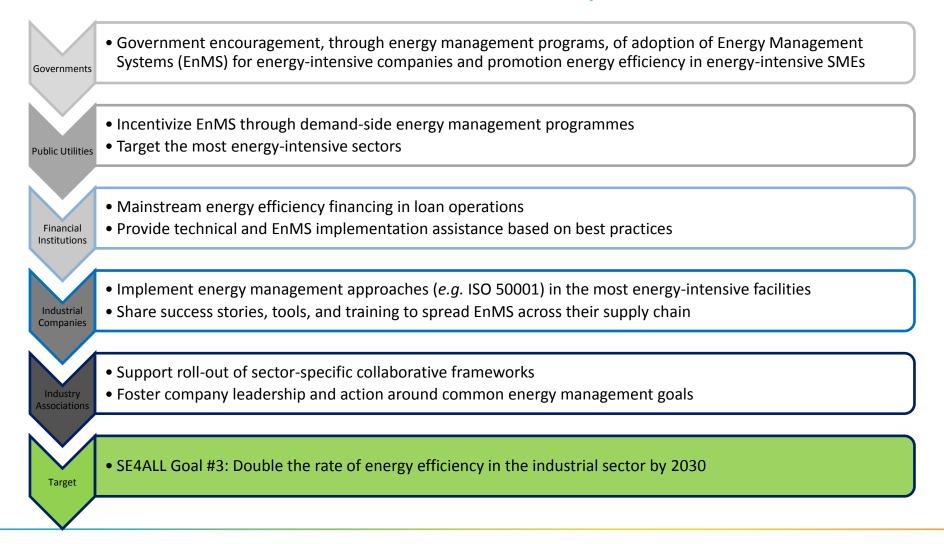
SE4ALL: Industrial Energy Efficiency Accelerator Structure and Building Blocks







IEE Accelerator: Differentiated Responsibilities







Principal Offerings of the Industry EE Accelerator: Support for development and formulation of EE policies

 Integrated policy and investment roadmap that provides innovative tools and instruments to promote successful polices under local circumstances at regional, national, and subnational levels

Capacity building for adoption of EnMS

• Training of public and private officials via "train the trainer" approaches, and on-theground region and sector-specific pilots

Financing solutions for the development and implementation of Accelerator goals

• Financial institutions mainstream EE financing into standard loan operations, coupled with technical and EnMS implementation assistance

Knowledge-sharing and information dissemination

• Platform for knowledge exchange for best practices in policy design and implementation, fostering south-south collaboration to address information barriers





Thank you for your attention

For more information:

Pradeep Monga

Director Energy Department UNIDO Vienna International Centre P.O. Box 300 A-1400 Vienna, Austria E-mail: <u>P.Monga@unido.org</u>