



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Outcomes of Paris Agreement and the Way Forward

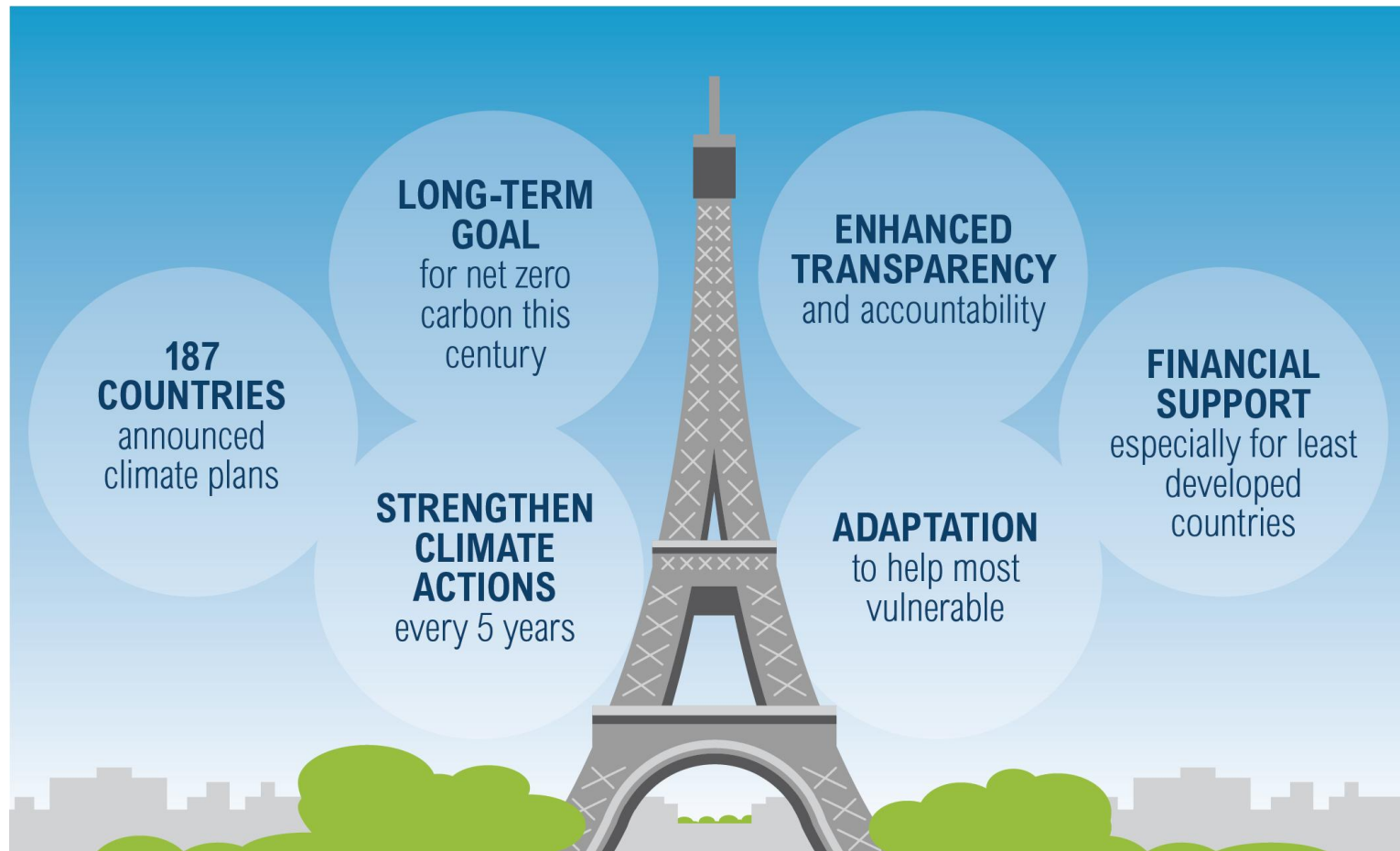
Dr. Pradeep Monga
Director of Energy
UNIDO

22 March 2016



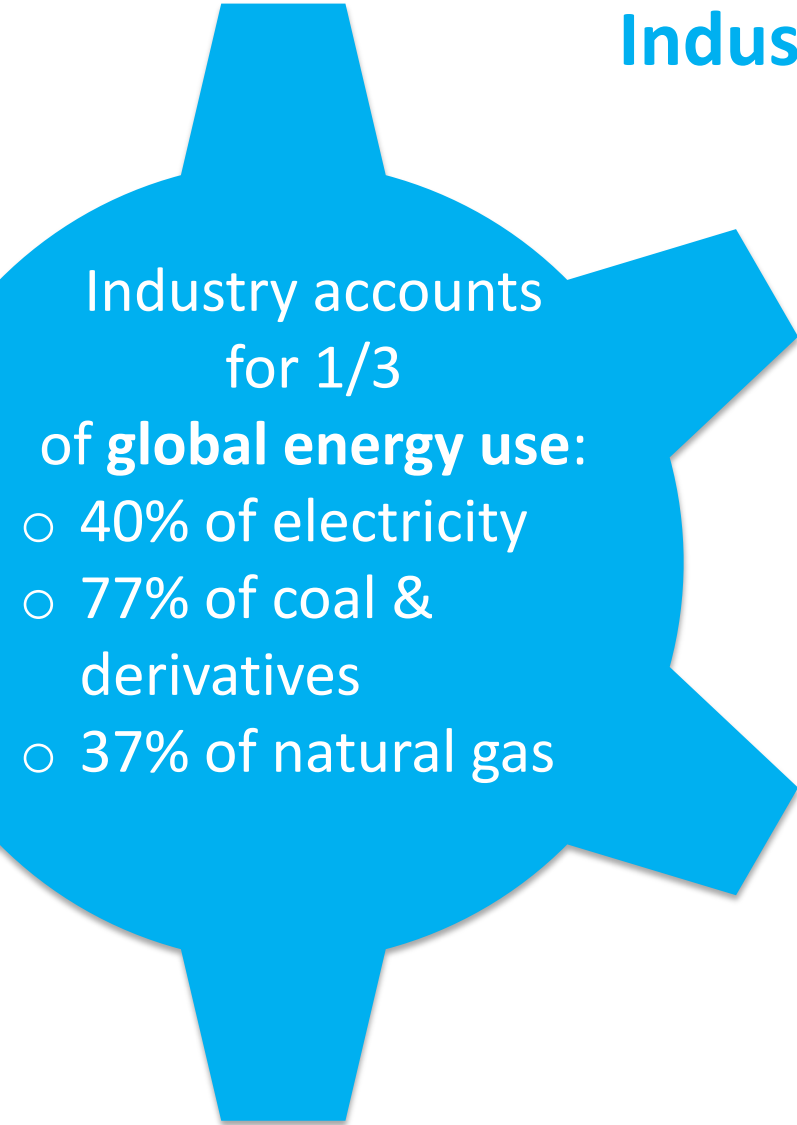
INCLUSIVE AND SUSTAINABLE INDUSTRIAL DEVELOPMENT

Paris Climate Agreement



Source: UNFCCC/WRI

Industry, Energy and Climate Change

A large blue gear-shaped graphic on the left side of the slide, containing text about industry's share of global energy use.

Industry accounts
for 1/3

of **global energy use**:

- 40% of electricity
- 77% of coal & derivatives
- 37% of natural gas

Global Primary Energy Demand by 2030:

- **50% increase expected**
- **87% from non-OECD countries**
(industry biggest user)

A yellow gear-shaped graphic on the right side of the slide, containing text about industry's share of global greenhouse gas emissions.

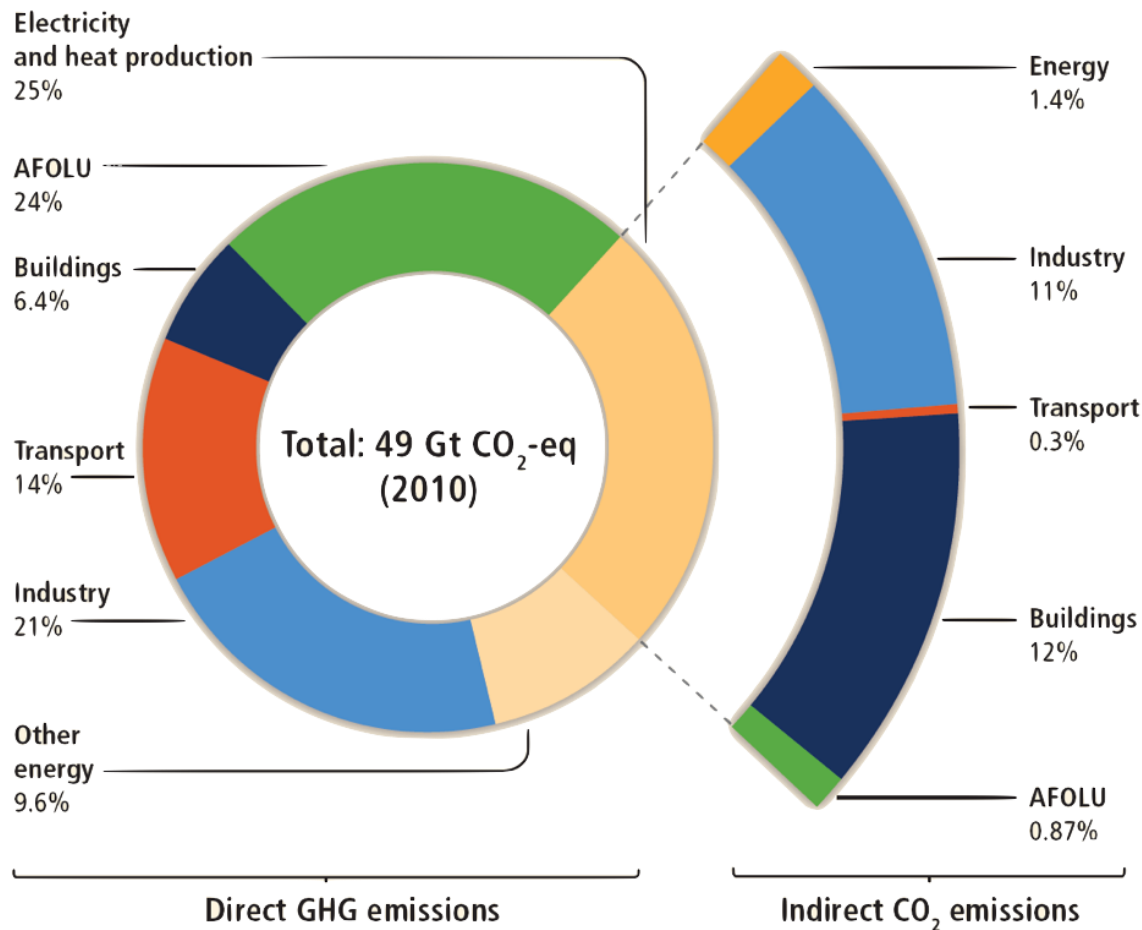
Single largest
source

of **GHG emissions**:

32% of global
emissions

Source: IEA, Technology Transitions for Industry, 2009

Greenhouse Gas Emissions by Economic Sector



Source: IPCC AR5



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

Thematic Areas:



Creating shared prosperity



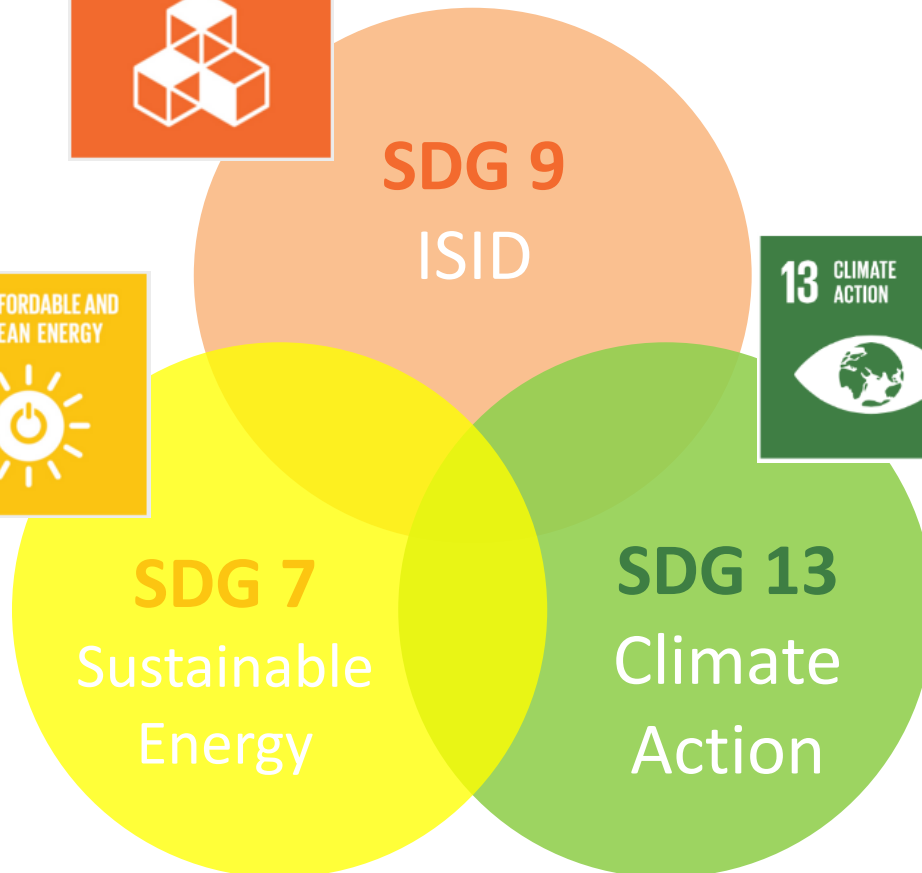
Advancing economic competitiveness



Safeguarding the environment

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

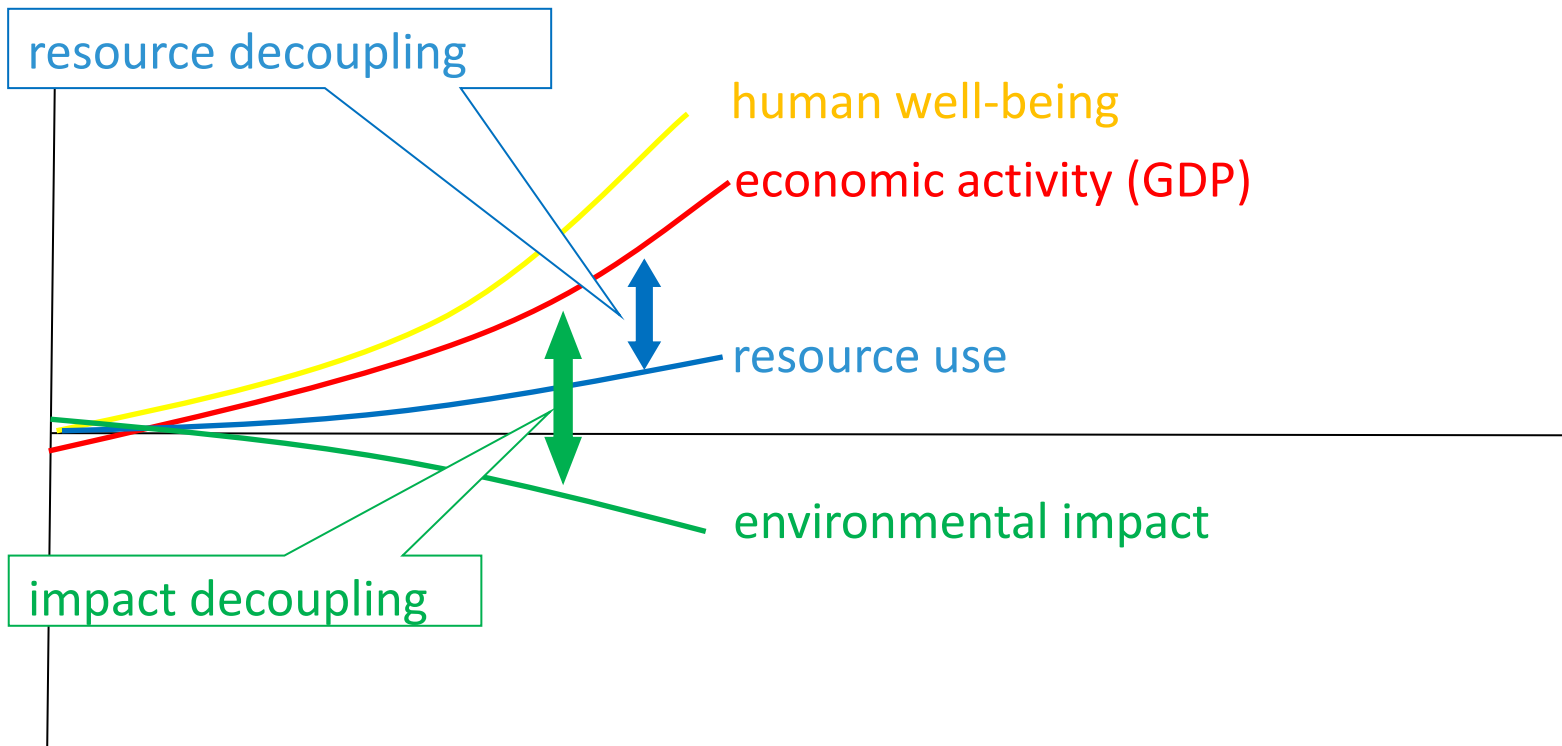
Industry, SE4ALL and SDGs



- Jobs Creation
- Business Models
- Women's Empowerment
- Nexus Co-benefits
- Promoting innovation
- Sustainable Energy and Climate Agreement

Sustainable Industrialization

- **produce more with less**
- **economic progress with less environmental impact**



Promoting sustainable energy solutions for productive capacities, industrial competitiveness and job creation



**Industrial
Energy
Efficiency**



**Renewable
Energy for
Productive Uses**



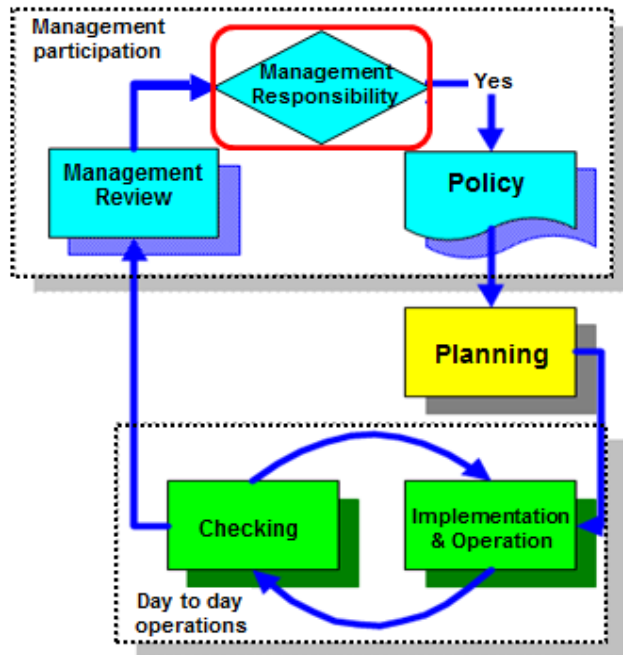
**Low-Carbon Low
Emission
Technologies**



**Climate Policy,
Partnership and
Global Forums**

UNIDO Industrial Energy Efficiency Programme

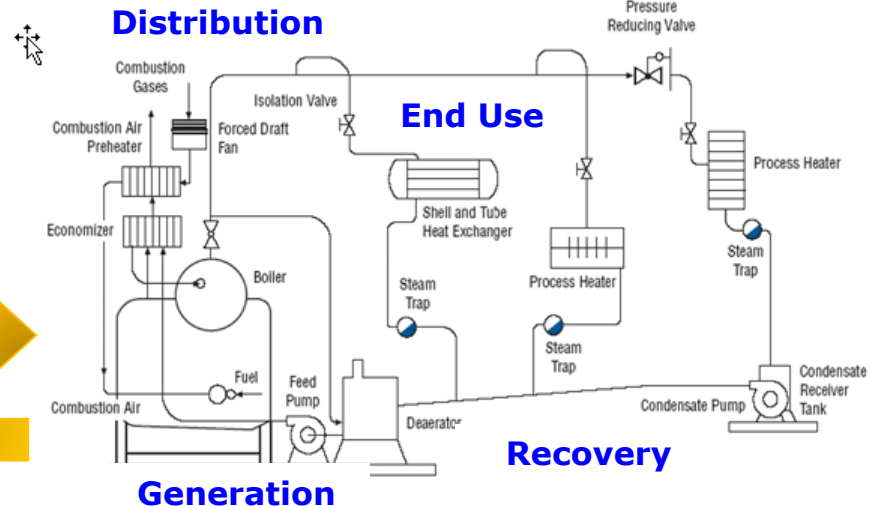
Energy Management Systems



EE INTEGRATED

ENERGY SAVINGS & INVESTMENTS

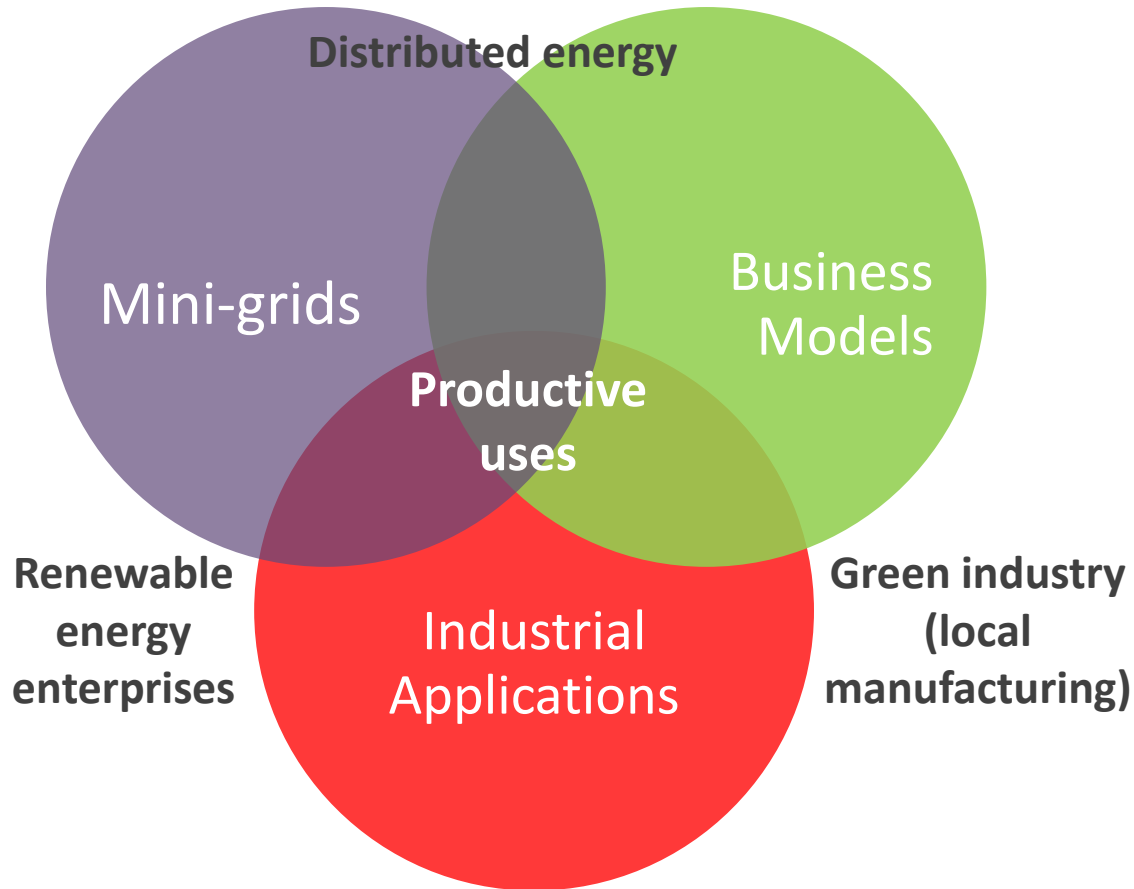
Energy System Optimization



- ✓ Auxiliary energy systems account for over 50% of final manufacturing energy consumption
- ✓ System optimization average efficiency gains range between 15-30% against 4-5 % of individual components

New business
paradigm

UNIDO Renewable Energy Programme



- Create business development opportunities through increasing access to energy through **mini-grids**;
- Mainstream the use of renewable energy in **industry** (SMEs);
- Support innovative **business models** to promote renewable energy in the business sector



Sustainable Industrialization and Climate Change

KEY AREAS OF UNIDO's INTERVENTIONS

- LOW CARBON TECHNOLOGY TRANSFER
- CLEAN TECHNOLOGY INNOVATION
- NEW FINANCING INSTRUMENTS: PRIVATE SECTOR
- REGIONAL COOPERATION
- KNOWLEDGE MANAGEMENT AND CAPACITY BUILDING

UNIDO: Tackling climate change

- **Montreal Protocol:**
 - Each year 5-6 times of 1st phase of Kyoto Protocol in CO₂e avoided
 - Until 2010: 70,287 tonnes Ozone Depleting Potential
 - UNIDO: 1200 projects, globally 27% share, 100 countries
- **Sustainable Energy:**
 - SE4ALL objectives in line with 2 degree Celsius target
 - By 2015: 200 million with electricity and 400 million clean cooking
 - 80 countries opted-in and 118 with RE policy targets
 - UNIDO: ~120 projects, 50+ countries
- **Mitigation and Adaptation**
 - New: climate resilient industries along energy-water-food nexus
 - UNIDO: several Large Maritime Ecosystems (LME) rehabilitation

Climate Technology Centre and Network (CTCN)

- Operative arm of the UNFCCC Technology Mechanism
- Working for National Designated Entities
- CTCN is hosted by UNEP and UNIDO
 - Affiliated networks
 - 11 independent, regional and global consortium partner organizations with expertise in climate change technologies
 - International network of 100+ academic, multilateral, NGO and private sector institutions
 - Strategic Partners





Low Carbon Low Emission Clean Energy Technology Transfer (LCET) Programme

Promoting dissemination of low carbon technologies in developing countries to increase access to renewable energy for productive uses and job creation in rural areas.



Countries targeted: Ethiopia, Kenya

Pilots:
Demonstrating innovative advanced Micro Hydropower and Solar Energy Technologies in the initial phase





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Innovation Ecosystem for SMEs

Global Cleantech Innovation Programme (GCIP)



Policy and Regulations
A Cleantech Innovation
Index for SMEs

Mentoring and Training
Business Clinics
Investor Connect

**Fostering
an Innovative
Cleantech Ecosystem**

Linking Innovative
Enterprises to Private
Sector Financing and CSR
Initiatives

Building the National
Institutional Capacity



Private Financing Advisory Network (PFAN)

Multilateral public-private partnership that nurtures clean energy projects by bridging the gap between investors and clean energy entrepreneurs and project developers

- **Advice and Guidance**
 - financial structuring
 - sourcing of equity and debt
 - business growth
 - strategy, preparation and presentation of business plans
- **Matching Projects with Investors**
 - selected projects introduced to investors financing forums
 - direct introduction to network investors and other potential investment sources
- **Funding partners include:**
 - **Climate Technology Initiative (CTI); multilateral initiative (Australia, Austria, Canada, Germany, Japan, Norway, the Republic of Korea, Sweden, the United Kingdom and the United States)**
 - **United States Agency for International Development (USAID)**
 - **Energy and Climate Partnership of the Americas (ECPA)**
 - **International Development Research Centre (IDRC) / Canada**
 - **International Center for Environmental Technology Transfer (ICETT) / Japan**
- **Pledges for forthcoming funding from Australia, Sweden, USA, Japan and Green Climate Fund**

Flagship Programme on Sustainable Cities

- More than **half of the global population** today **live in cities**. By 2050, this is expected to increase to two-thirds.
- **Sustainable Cities** are vital to ensure people, the urban infrastructure and the local ecosystem do not suffer due to unsustainable urban growth.
- GEF launched the Sustainable Cities Integrated Approach Pilot (SC-IAP) to help cities address environmental degradation caused by rapid urbanization. **UNIDO as the implementing agency** has projects in Senegal, Malaysia, Cote d'Ivoire, China and India.





UNIDO and Sustainable Energy for All (SE4ALL)

Strategic Partnership

Global Hub for Industrial Energy Efficiency

Regional Approaches and Country Level Action Plans – Focus on IEE and RE Technologies

System Approach on Nexus Issues (Energy-Water-Food-Health)

Technology Transfer, Scaling up Investments and Capacity Building

South-South Cooperation

Technology Transfer and Knowledge Management

1. India (UCSSIC)-Benin-Nigeria: Biomass gasification technology
2. India(UCSSIC)- Bangladesh: Solar Micro-utility enterprises for promoting rural energy and productive uses
3. South Korea-Ghana: Supporting green industrial development through biogas technology and business for sustainable growth
4. China (International Centre for Small hydro Power and International Solar Energy Center): Renewable Energy based electricity Generation for Isolated Mini Grids in Zambia, Sierra Leone, Nigeria, LAC region
5. Brazil – Africa (International Biogas Centre, Itaipu): SADC, ECOWAS and EAC



Women's Empowerment and Gender Mainstreaming

Best practice project

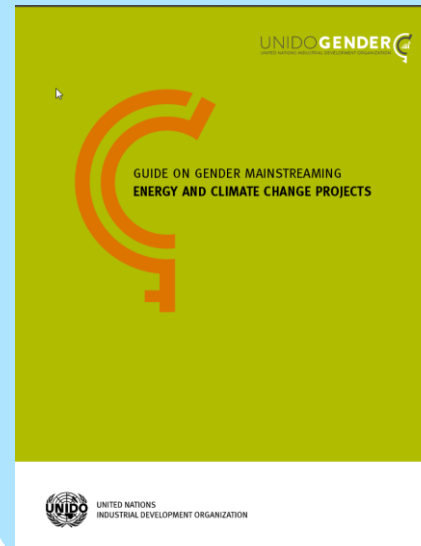
Empowering women beer brewers using energy efficient stoves in Burkina Faso

- Technical assistance to 1,600 women entrepreneurs
- Increased profits achieved by a 40-50% reduction in the amount of firewood consumed
- Foster women's access to financial institutions/ business and knowledge gateways
- Improvements to the health and environmental conditions



Publications

- 1- Sustainable Energy for all: the Gender Dimensions (UNIDO-UN Women joint publication)
- 2- Energy-Gender Mainstreaming Guide (UNIDO publication)





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Global Network of Regional Sustainable Energy Centres

Hubs for SE4ALL and Climate Action



RCREEE
Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

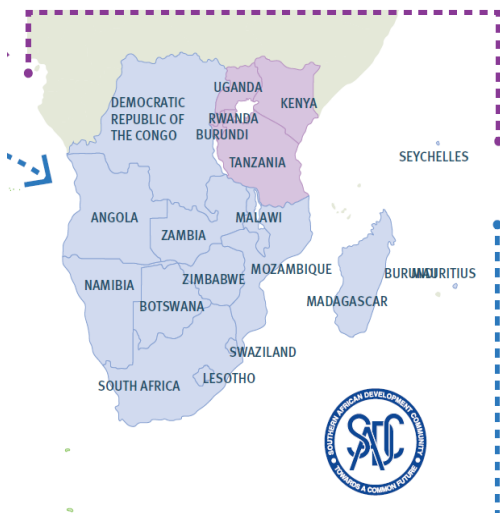
Austrian
Development Cooperation



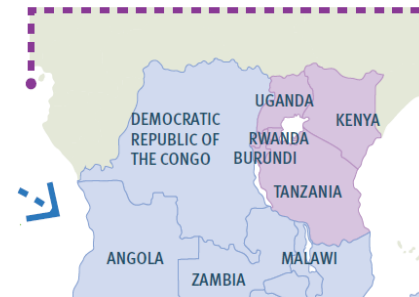
Accelerate and complement national efforts through regional interventions



Southern African Centre for Renewable Energy and Energy Efficiency (SACREEE) – Namibia



East African Centre for Renewable Energy and Energy Efficiency (EACREEE) - Uganda



ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) – Cape Verde

Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE)

- Preparatory process with SIDS DOCK and CARICOM
- CCREEE approved by the Ministerial COTEDs on Energy and Environment in Nov. 2014 and Feb. 2015
- The 36th Regular Meeting of CARICOM Heads of Government, held at Bridgetown, Barbados, 2-4 July 2015, endorsed the creation of CCREEE and confirmed Barbados, as the host country.
- **Inauguration of the centre took place on 28 October 2015 in Barbados**





Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE)

- Partnership with SPC and SIDS DOCK
- Needs assessment and project document on the design of the centre finalized
- In September 2015, SPC was confirmed as the host for PCREEE by the Pacific Ministers of Energy.
- PCREEE to be hosted by the Kingdom of Tonga under the SPC framework
- Planned inauguration in August 2016



ACP – UNIDO COOPERATION FOR CLIMATE ACTION

POTENTIAL AREAS of FUTURE COOPERATION:

- Programmatic approaches for technology transfer and innovation (CTCN, Cleantech, SE4ALL, PFAN)
- Regional cooperation (Regional Centres for Policy, Institutional and Markets Coherence)
- Knowledge Management and Capacity Building (Regional Centres as Hubs for SE4ALL, Nexus Issues and Climate Action)
- Public Private Partnerships (Financing, Jobs and Economic Development)



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Thank you

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