

## 9TH INTERNATIONAL FORUM ON ENERGY FOR SUSTAINABLE DEVELOPMENT

### «Energy efficiency in industry - a guarantee of increasing the competitiveness of the economy»

System approach to energy consumption.  
Implementation of the Energy Management Systems  
standard in the Ukrainian industry



Information about UNIDO and UKR IEE Project  
15 November 2018  
Kyiv, Ukraine



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- ✓ UNIDO-GEF Global EnMS-ISO 50001 Program
- ✓ Energy Management Systems – what is the effect of implementation?
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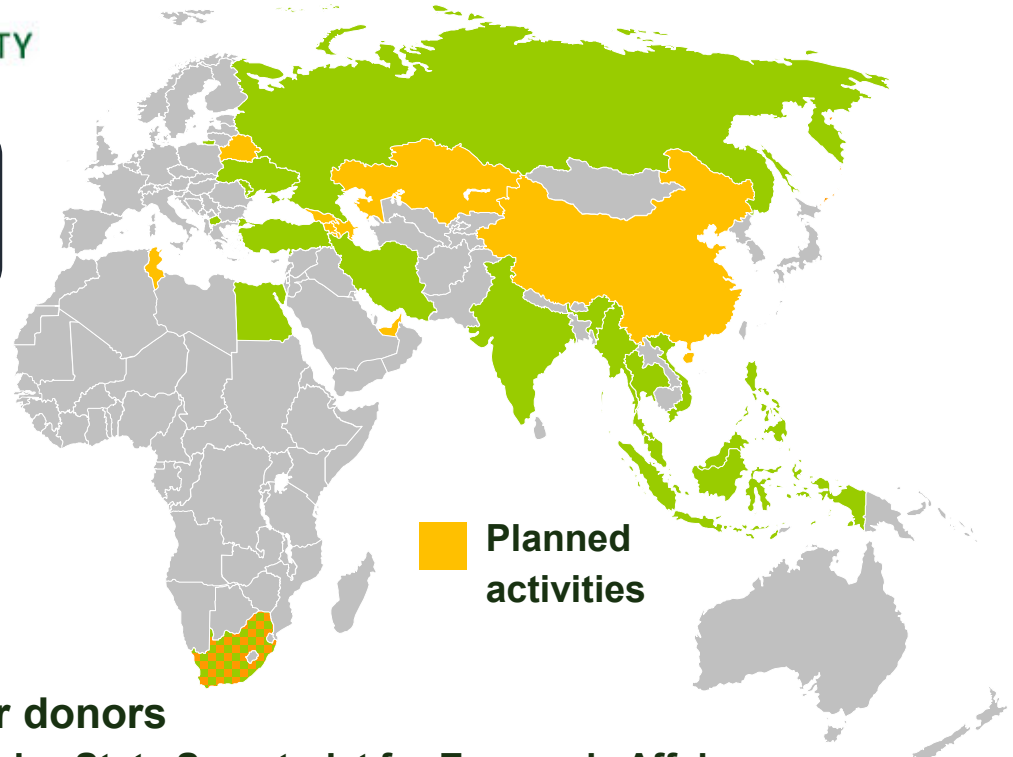
# UNIDO-GEF Global EnMS-ISO 50001 Program



**Operational in 19 countries**  
**Planned activities in 10 countries**

 **Projects ongoing**

- |              |             |
|--------------|-------------|
| South Africa | Philippines |
| Moldova      | Egypt       |
| Russia       | Indonesia   |
| Turkey       | Iran        |
| Ecuador      | Ukraine     |
| Malaysia     | Colombia    |
| Thailand     | Macedonia   |
| Viet Nam     | Myanmar     |
| India        | China       |
|              | Georgia     |



 **Planned activities**

### Other donors

- ✓ Swiss State Secretariat for Economic Affairs
- ✓ UK Department for International Development
- ✓ Government of South Africa
- ✓ Government of Italy

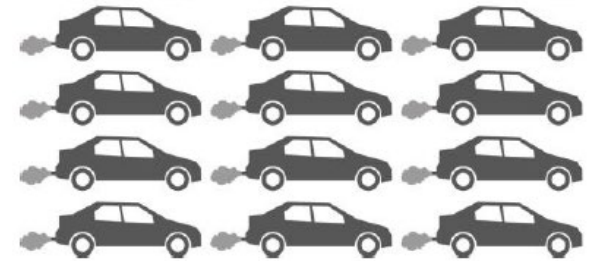
# How much energy is 7,000 GWh?



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 80,000,000** without considering non-energy benefits
- Annual CO2 emission reductions of **4.3 million tCO2**





## What can be achieved with the introduction of EnMS?

- Most of the industrial enterprises that introduced EnMS achieved an average annual energy intensity of 2-3%, unlike 1% for business as usual (IRL, NET, DEN, SWE, USA);
- For companies "new" for energy management, energy saving in the first 2 years can reach 10-20%;

### UNIDO experience:

After implementation of the EnMS in accordance with the requirements of the international standard ISO 50001 "Energy Management Systems", the average energy savings in the first 1-2 years reaches the level from **5% to 15%** with low capital investments



## Information on the UKR IEE Project

- **Donor:** «Global Environment Facility» (GEF)
- **Implementing Agency:** UNIDO (United Nations Industrial Development Organization – UN specialized agency)
- **Project Partners:**
  - Ministry of Economic Development and Trade of Ukraine;
  - State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE);
  - Resource Efficient and Cleaner Production Centre (RECPC).



## Information on the UKR IEE Project

### **The main objective of the project:**

Increasing the energy efficiency of Ukraine's industry by encouraging the widespread introduction of energy management systems in accordance with the requirements of the international standard ISO 50001 "Energy Management Systems"

### **The objectives:**

- Increasing the energy efficiency of Ukraine's economy;
- Establishment of regulatory framework for investments in energy efficiency of industry;
- Creation of a practicing expert environment on energy management in Ukraine;
- GHG Emission Reductions.

## Project components:

**1**

**Policy and institutional support for the introduction of a national energy management system standard corresponding to ISO 50001**

**2**

**Building the national capacity on the planning, implementation & certification of energy management systems and system optimization**

**3**

**Technology diffusion and deployment to promote implementation of energy management systems in selected industrial sectors**



## Selected Industrial Sectors:

1

**Metallurgy and finished metals**

2

**Construction and Building Materials**

3

**Chemicals and Petro-chemicals**

4

**Mining**

...

**But this list is expanded with other energy intensive enterprises**



## Interim Results (Component 1):

### Nationalized standards of ISO 50000 family:

- ISO 50002:2016,
- ISO 50003:2016,
- ISO 50004:2016,
- ISO 50006:2016,
- ISO 50015:2016

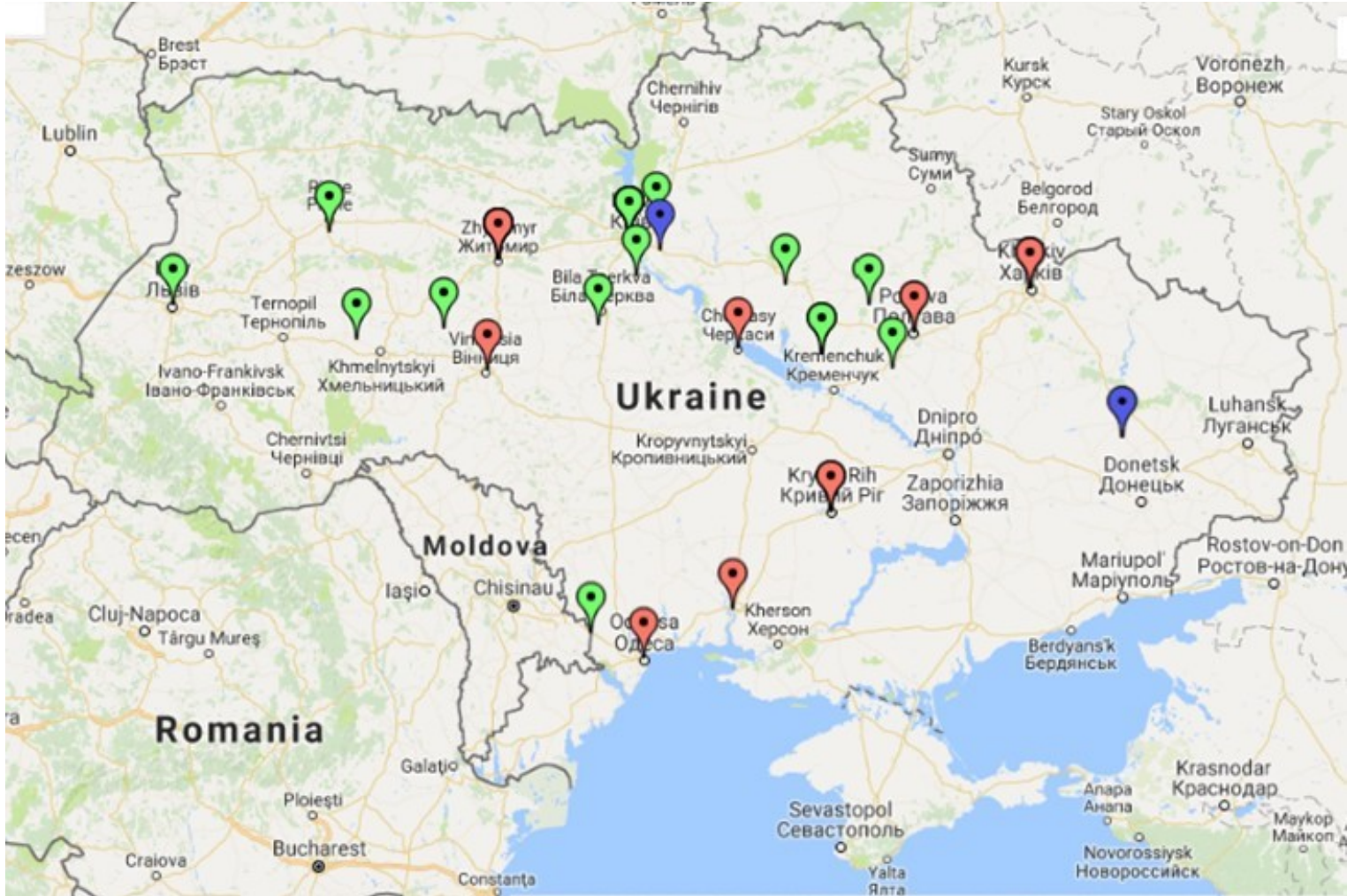
### Nationalized other EE standards (7 standards):

- EN 15900:2018,
- EN 16231:2018,
- ISO 17741:2018,
- ISO 17742:2018,
- ISO 17743:2018,
- ISO/IEC 13273-1:2018,
- ISO/IEC 13273-2:2018)

## Interim Results (Component 2):

Training and Capacity Building	Total trained	Certified
EnMS (user level, 2 days)	162	162
EnMS (expert level, 1 year)	96	42
Fan System Optimization (FSO) (user level, 2 days)	106	106
Fan System Optimization (FSO) (expert level, 1 year)	15	7
Compressed Air System Optimization (CASO) (user level, 2 days)	105	105
Lead Auditors for Certification Bodies (12 regions)	81	58

## Interim Results (Component 2):





# Thank you!

## Project management Group

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