NATIONAL ENERGY EFFICIENCY ACTION PLAN IMPLEMENTATION: experience of Ukraine

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National Energy Policy Planning under implementation of Energy Community acquis

Renewable Energy Directive

National Renewable Energy Action Plan

approved by

Government Resolutions

As of Oct.1, 2014 № 902-п

Energy Services Directive

National Energy Efficiency Action Plan

As of Nov. 25, 2015 № 1228-п
National Indicative Target

For this NEEAP TIMES-Ukraine model was used

The main target of NEEAP –
reduction of final energy consumption by 9% in 2020 (6.5 mln. toe)
intermediate energy savings target of 5% in 2017 (3.6 mln. toe)

NEEAP complies with “Ukraine-2020” Strategy and State Regional Development Strategy
National Energy Balance-2014

Structure of final energy consumption

Industry; 33%
Residential Sector; 33%
Transport; 17%
Services; 8%
Non-energy consumption; 6%
Agriculture; 3%

State Statistic Office of Ukraine Data

State Agency on Energy Efficiency and Energy Saving of Ukraine
National Indicative Targets Allocated to 4 Main Sectors

- 3226 ktoe (50%) Residential Sector
- 1610 ktoe (25%) Industry (+Agriculture)
- 1041 ktoe (16%) Services
- 624 ktoe (9%) Transport

Estimated Investment Needs: €35 billion
Energy Savings of Every Proposed Energy Efficiency Improvement Measure Were Also Estimated

<table>
<thead>
<tr>
<th>Residential</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ thermal modernization of buildings, financial support for households and creation of Energy Efficiency Fund; ✓ 100% metering and billing; ✓ energy audits and certification schemes; ✓ energy labeling; ✓ adaptation of building regulations, building codes and standards according to the requirements of the European legislation etc.</td>
<td>✓ implementation of energy efficiency measures incl. via EPC; ✓ energy audit and energy management systems; ✓ energy labelling; ✓ eco-design; ✓ adoption of incentive tariff (RAB-regulation); ✓ unbundling of natural monopolies in the heat supply etc.</td>
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<table>
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<tr>
<th>Services</th>
<th>Transport</th>
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<tbody>
<tr>
<td>✓ thermal modernization of public buildings with involvement of energy service companies (energy performance contracts); ✓ implementation of energy monitoring and energy management; ✓ energy efficiency criteria in public procurement procedures; ✓ Review of building codes and standards etc.</td>
<td>✓ Optimizing the structure of passenger and freight traffic in cities; ✓ Adaptation of fuel standards and its technologies of use to European standards; ✓ Public and private transport fleet renovation; ✓ Promotion and supporting of bicycles and conducting Car-free days etc.</td>
</tr>
</tbody>
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The most important horizontal measure - **conducting of awareness campaigns in EE**

State Agency on Energy Efficiency and Energy Saving of Ukraine
## EE Policy Focuses on Buildings

<table>
<thead>
<tr>
<th>Residential buildings</th>
<th>Public entities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multi-apartment</strong></td>
<td><strong>Individual</strong></td>
</tr>
<tr>
<td><strong>Number of buildings</strong></td>
<td></td>
</tr>
<tr>
<td>≈ 80 thousand</td>
<td>≈ 6,5 million</td>
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<tr>
<td>≈ 100 thousand</td>
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<tr>
<td><strong>Investment needs</strong></td>
<td></td>
</tr>
<tr>
<td>≈ from 48.5 to 86.9 bln. dollars. USA*</td>
<td>≈ from 4.2 to 8.5 bln. dollars. USA*</td>
</tr>
<tr>
<td><strong>POTENTIAL ANNUAL GAS SAVINGS</strong></td>
<td></td>
</tr>
<tr>
<td>8 bln m3</td>
<td>700 mln m3</td>
</tr>
</tbody>
</table>

*Depending on the level of thermomodernization

State Agency on Energy Efficiency and Energy Saving of Ukraine
State Support Mechanism for Residential Sector introduced in 2015

Partial reimbursement of loans for energy efficiency measures

- **20%** - for households (apartments and individual houses) for gas boilers replacement;
- **30%** - for households (apartments and individual houses) for energy efficiency measures;
- **40%** - for condominiums (Homeowners Associations) for energy efficiency measures;
- **70%** - for recipients of Housing and Utility subsidies*

SAEE reimburses only EE materials and equipment (excl. installation cost and other expenditures)

*As for 01.01.2016 5,5 mln households in Ukraine subsidized (according to Ministry of social policy)
First Successful Cases of State Program for Residential Sector

In 2015:

Attacted loans: **80 thousand with amount of 1.3 billion UAH** (20% - recipients of HUS subsidies);
206 loans attracted by HOAs.
The share of "energy efficiency loans" attracted only within 7 months is 1.32% of overall balance of loans for natural persons.

State expenditure: **300 million UAH**

In 2016:

Approved state budget expenditure: **900 million UAH (~30 mln Euro)**

Continue to involve municipalities in HH Support Schemes (120 regional programs are under preparation)

“Bottom-Up” Methodology for Monitoring and Verification of State Program is under preparation (with USAID and IFC support) should be used for NEEAP’s M&V

State Agency on Energy Efficiency and Energy Saving of Ukraine
Public Buildings: Legislative Base Creation for Energy Performance Contracting

Adopted Laws of Ukraine

№ 327-VIII as of 09.04.2015
On EPC public procurement selection criteria - not the lowest price but NPV of ESCO-project

№ 328-VIII as of 09.04.2015
On amendments to the Budgetary Code long term (up to 10 years instead of 1 year) budget obligations

Development of Secondary legislation

Model energy performance contract
Government resolution as of 21.10.2015 № 845

Methodology for Baseline calculation
Building standard approved by the Minregion 27.07.2015 №178

MoF order

MoF order

MoF order
Energy Performance Contracting: Challenges and Plans

Main Challenges:
- Tariff decrease risk for ESCOs;
- Low Capacity and Awareness.

Plans:
- Implementation of 3-4 pilot projects in Kyiv and Dnipropertovsk region till August-2016 (tenders are under preparations);
- Development of Guidelines for EPC tendering procedures and taxation for Contracting Parties;
- Conducting of National Awareness Campaign.
Implementation of Energy Community Acquis in 2016

(EPBD)
Law on Energy Efficiency in Buildings

(EED)
Law on Energy Efficiency

(EED)
Law on Obligatory Metering and Billing

State Agency on Energy Efficiency and Energy Saving of Ukraine
IFIs Main Initiatives in Energy Efficiency within the NEEAP targets in 2016

**UREEFF** (IQenergy) Project
http://www.iqenergy.org.ua/

- supporting energy efficiency improvements in residential sector. The program was designed by EBRD and is supported by donors in providing technical assistance (sponsored by E5P and SIDA)

**UKEEP**
http://www.ukeep.org/

Ukraine Energy Efficiency Program is a credit facility developed by EBRD, targeting Ukrainian private companies in all sectors looking to invest in energy efficiency or renewable energy projects. Donor support is carried out by SIDA, the EU, and Austrian Federal Ministry of Finance.

Establishing of “S2I” Fund
(Support of European Commission and Germany)
System for M&V needs to be established (TD statistics indicators and BU methods)

NEEAP implementation process need institutional capacities for effective monitoring, coordination and support (GIZ project and ECS).

Energy efficiency indicators are used for social-economic evaluation of regional development (incl. EE in houses and public buildings) (government resolution #856 as of 21.10.2015)
Thank You for Your Attention

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www.saee.gov.ua