

Second National Energy Efficiency Action Plan for Lebanon NEEAP 2016-2020

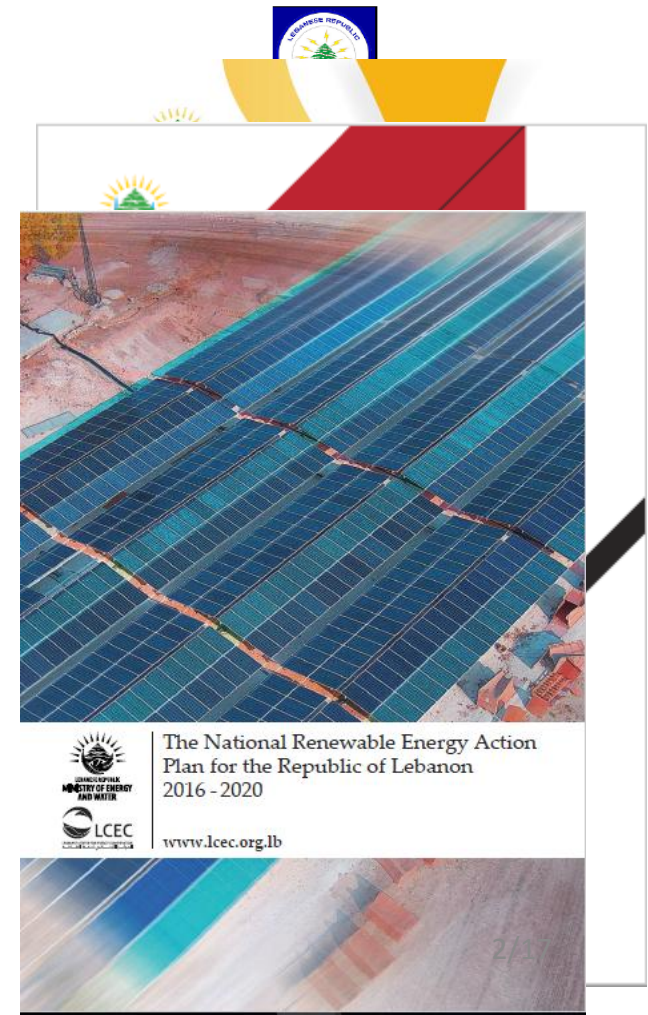
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October 24, 2017- Hilton Habtour

Policies targeting Energy Efficiency (EE) and Renewable Energy (RE)

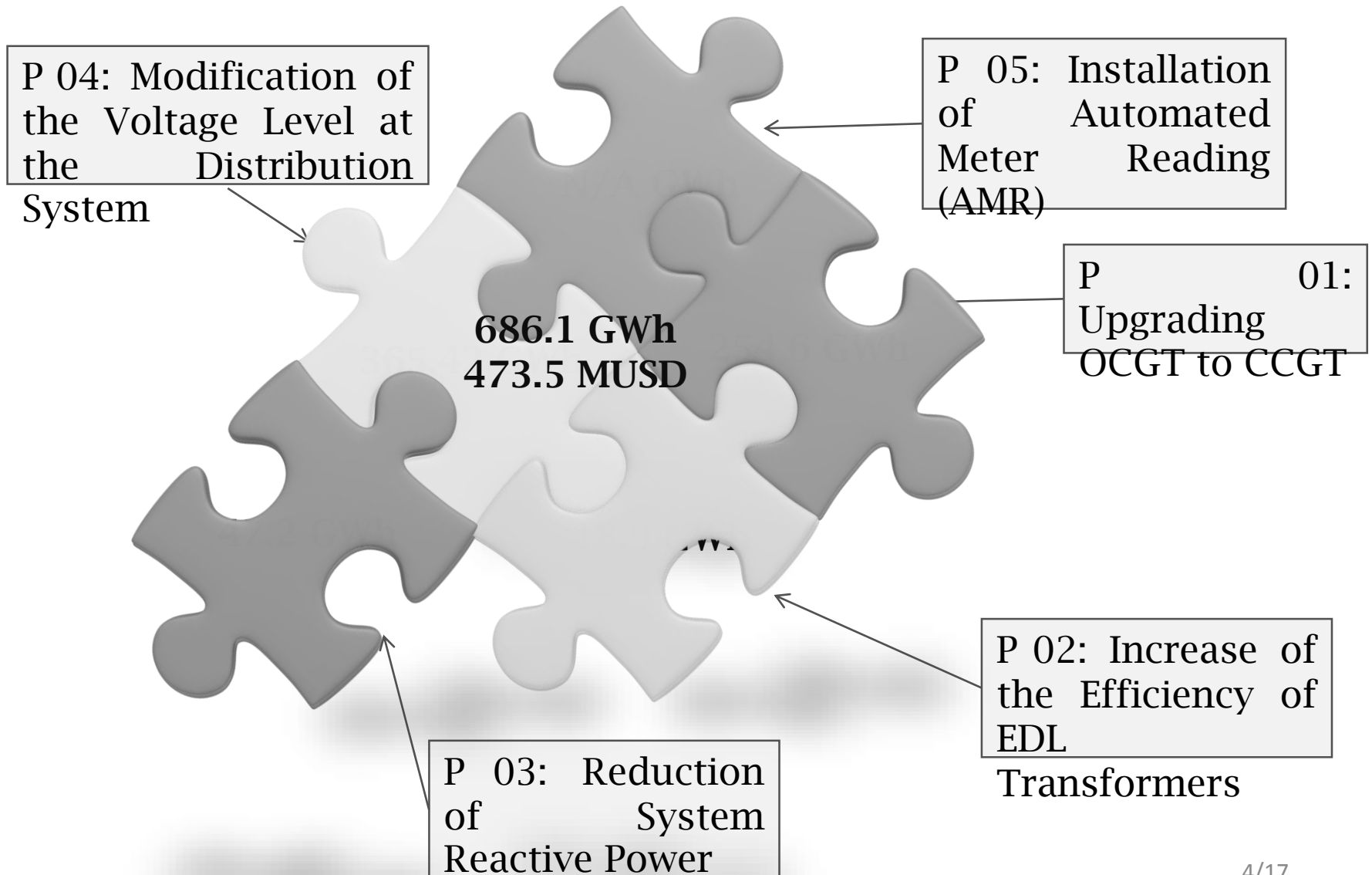
- Policy Paper for the Electric Sector 2010
- First National Energy Efficiency Action Plan (NEEAP 2011-2015)
- Second National Energy Efficiency Action Plan (NEEAP 2016-2020)
- National Renewable Action Plan (NREAP 2016-2020)



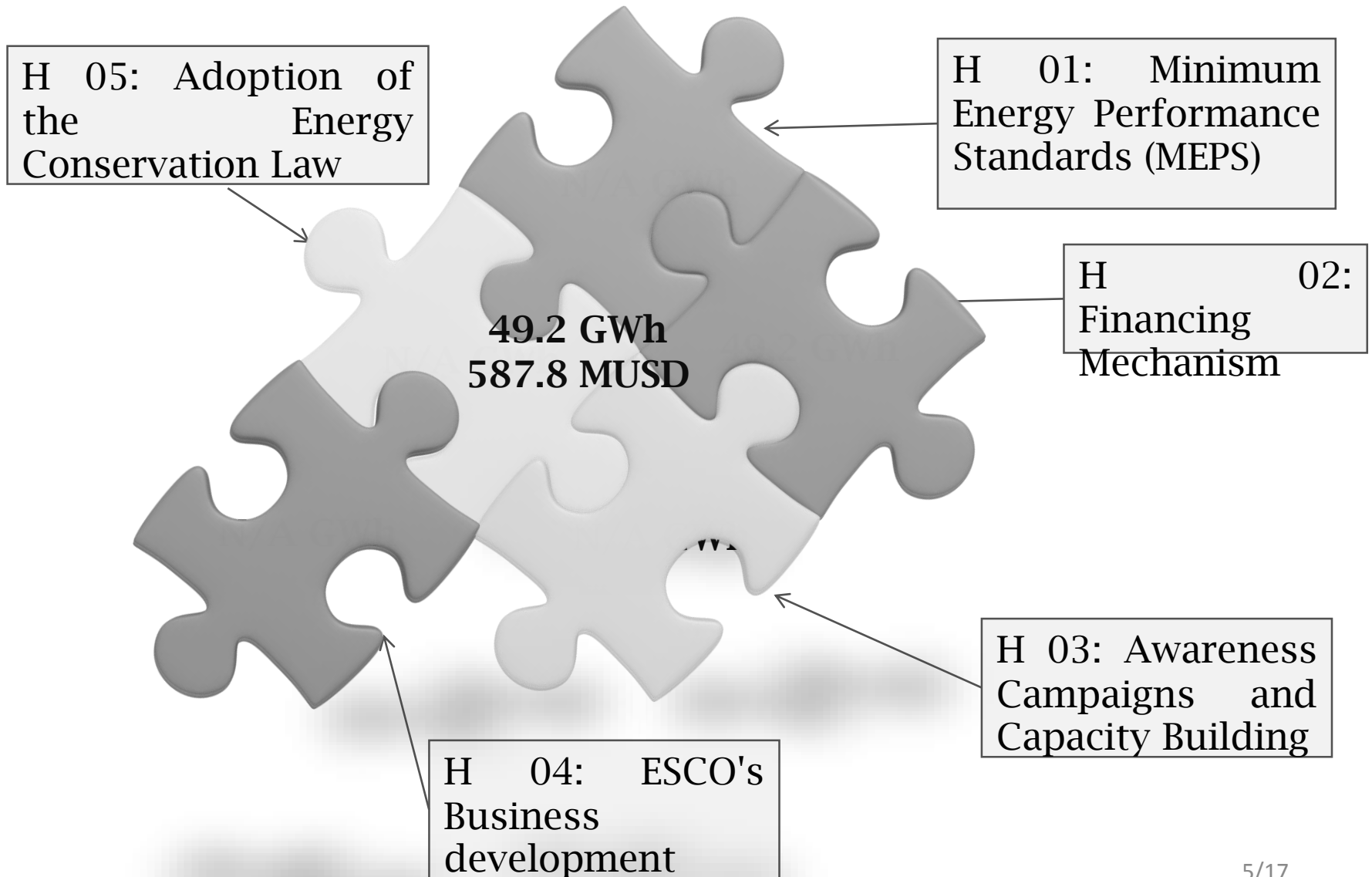
NEEAP 2016-2020

- NEEAP 2016-2020 is a five year plan
- NEEAP 2016-2020 was published in March 2016
- 26 Sectoral Measures
- Bottom-Up approach
- NEEAP 2016-2020 will be yearly evaluated

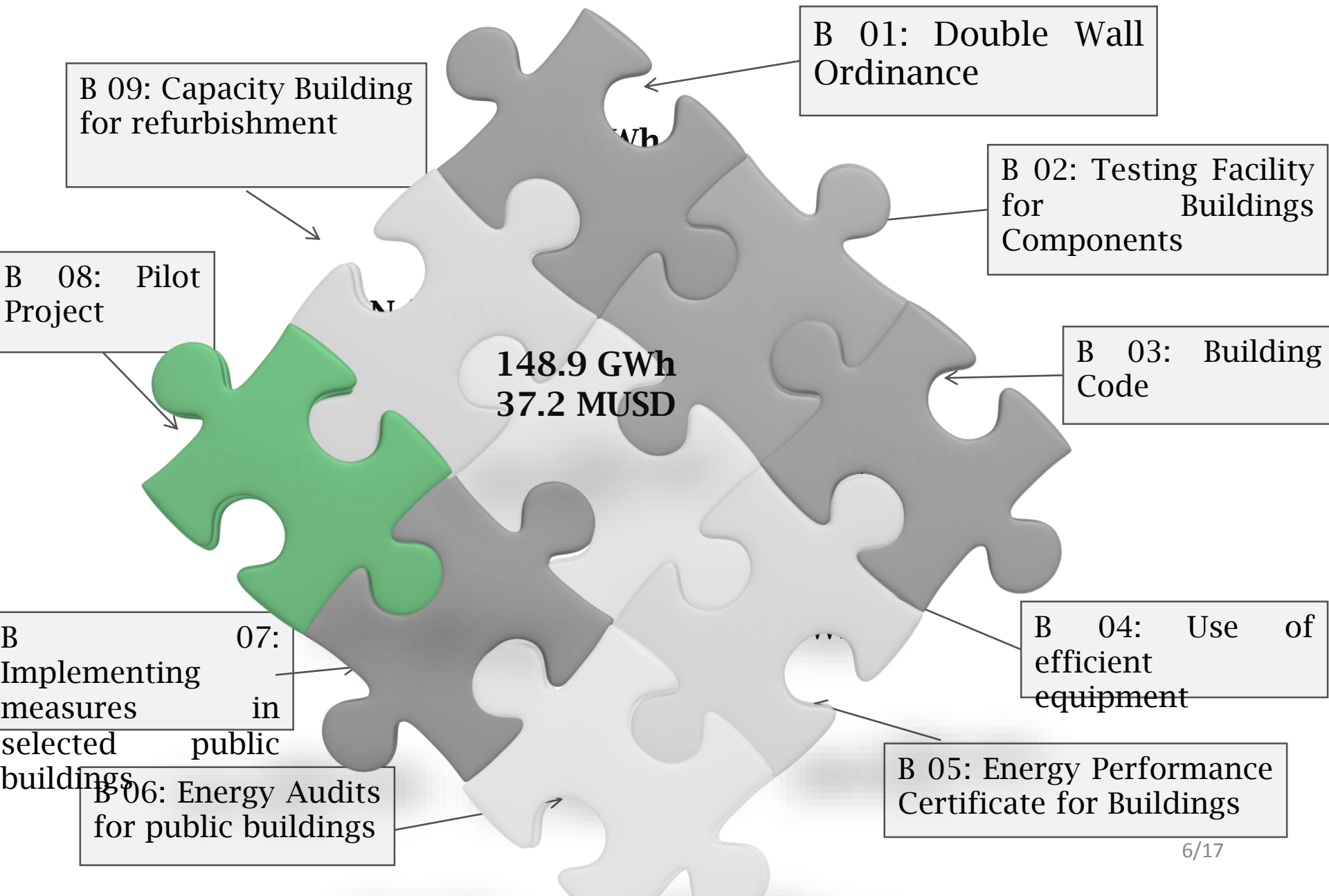
Power Sector Measures



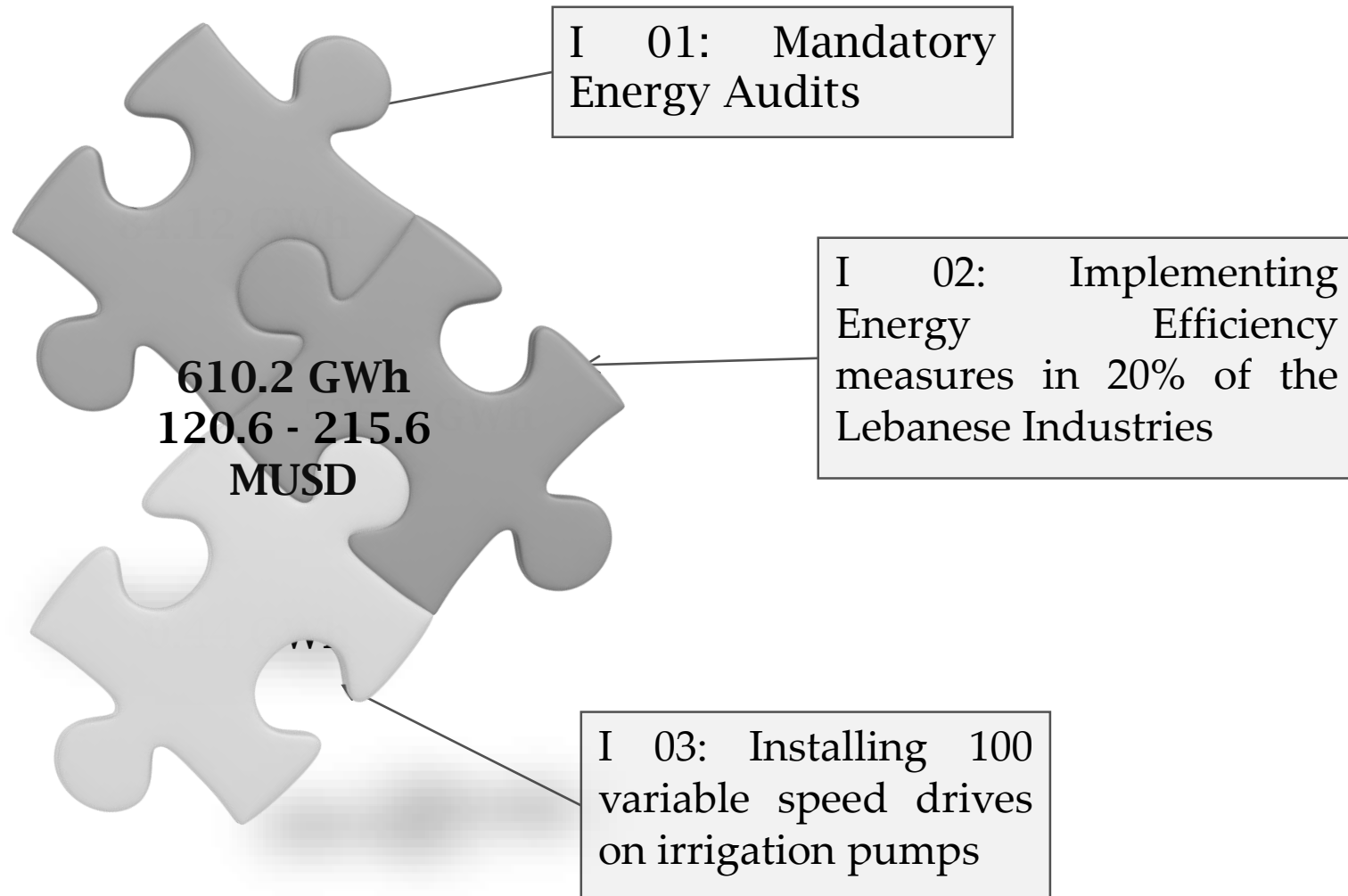
Horizontal Measures



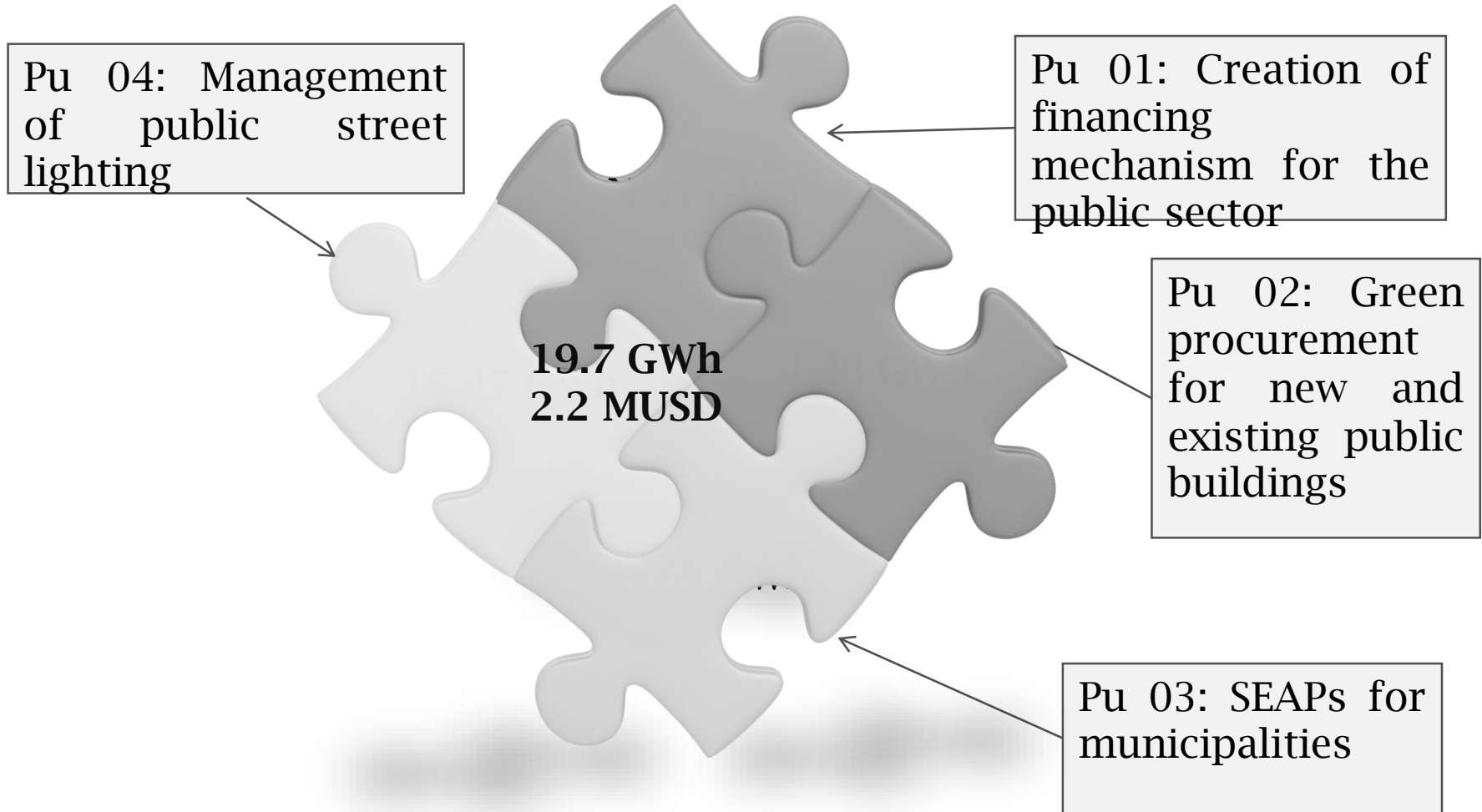
Building Sector Measures



Industry and Agriculture Measures



Public Sector Measures



- **Total Savings 1,514 GWh**
 - **1,221.5-1,316.5 MUSD**
- For an expected energy demand of 31,344 GWh in 2020 (BAU)**
- **Decreasing the demand Growth rate from 7% to 5.81%**

**& Agricultural
1 GWh
16 - 215.6 MUSD**

Cost Estimation and Financial Needs

Measure	Funds needed (MUSD)	Funds Source
Total	1,221.5-1,316.5	
Power Sector	473.5	Covered though the budget allocated to implement the policy paper for the electricity sector for the 5 measures
End-use	748-843	
Horizontal End-use measures	587.875	<ul style="list-style-type: none"> • <u>NEEREA</u> • Budget not available for 3/5 measures • <u>Budget to be made available by MEW for EE law</u>
End-use measures in the building sector	37.2	<ul style="list-style-type: none"> • Budget not available for 7/9 measures • <u>Pilot project, budget LCEC</u> • <u>Measures in public buildings, Potential Fund World Bank</u>
End-use measures in industry and Agriculture	120.6-215.6	<ul style="list-style-type: none"> • Budget not available for 3/3 measures
Energy efficiency in the public sector	2.2	<ul style="list-style-type: none"> • Budget not available for 3/4 Measures • <u>Replacing 9,000 lamps for street lighting to be covered by MEW</u>

Legal/regulatory needs

- Need of an EE and RE law (measure H05)
 - Mandatory standards for Equipment
 - Building Code
 - Double Wall ordinance
 - Mandatory Energy audits especially for the Industry and the public buildings

Capacity Building Needs

- H 03: Awareness Campaign and Capacity Building
 - **School curriculum** especially technical schools and institutes to include energy efficiency courses such as efficient heating and cooling, heat recovery, efficient buildings...
 - **Integrating Green Diploma** such as ProGreen program initiated by AUB, LAU and AUC, and the RE masters at the Lebanese university with ESIB/USJ collaboration, Schneider University
 - Promoting online student training programs
 - **Organizing continuous training sessions for installers of energy efficiency solutions, building constructors (Frame installation, pipes insulation, infiltration...)**
 - **Installing a certification system for contractors in the building and the industrial sectors**
 - **Installing a certification system for Operation and Maintenance works**
 - **Establishing periodic examination and certification for the professionals**

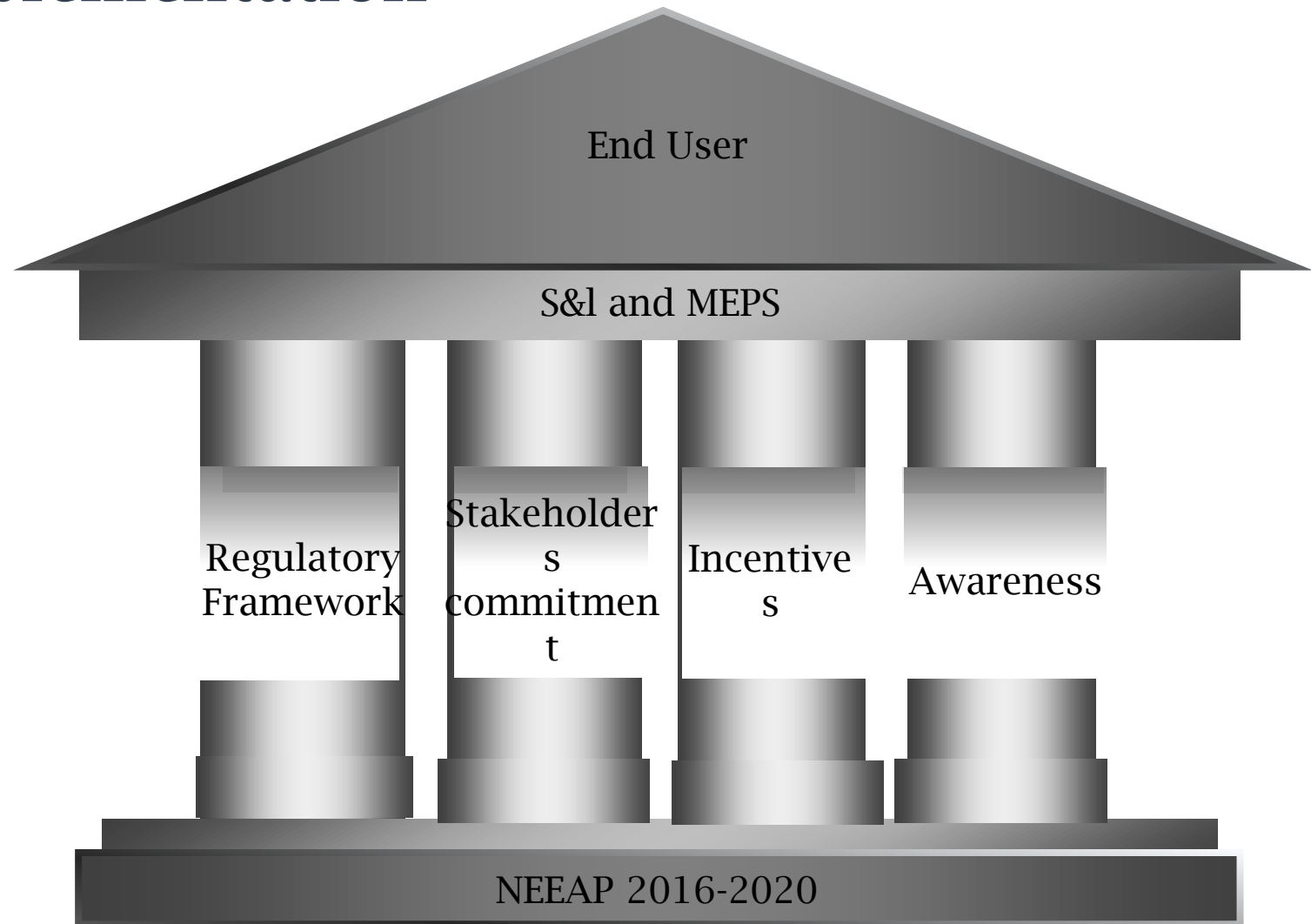
Current Activities

- H 01: Minimum Energy Performance Standards (MEPS)
- H 04: ESCO's business Development
- H 05: Adoption of the Energy Conservation Law
- B 02: Testing Facility for Buildings Components (With the Lebanese University)
- B 03: Green Building Code (With Libnor)
- Pu 03: SEAPs for municipalities

MEPS-Action Plan

- Energy Saving Programme for 4 appliances:
 - Split AC units
 - Refrigerators
 - Televisions
 - Washing Machines
- National Workshop (May 10,2017)
- Looking for fund to promote the use of energy efficient equipment
- Market surveys (retailers and importers)
- Proposal of a list of equipment to be exempted from taxes (Decree 167-2017)
- Home appliances committee at Libnor (Safety and Performance)

Road Map for MEPS and S&L implementation



ESCO's Business Development

- Applications received by July 2017
- 22 companies have submitted their applications
- Applicants have on average 11.7 years of experience in EE services
- Companies are relatively small-sized: on average 13.6 employees
- Round 2 is launched=>>> 10th of November 2017

Thank You

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