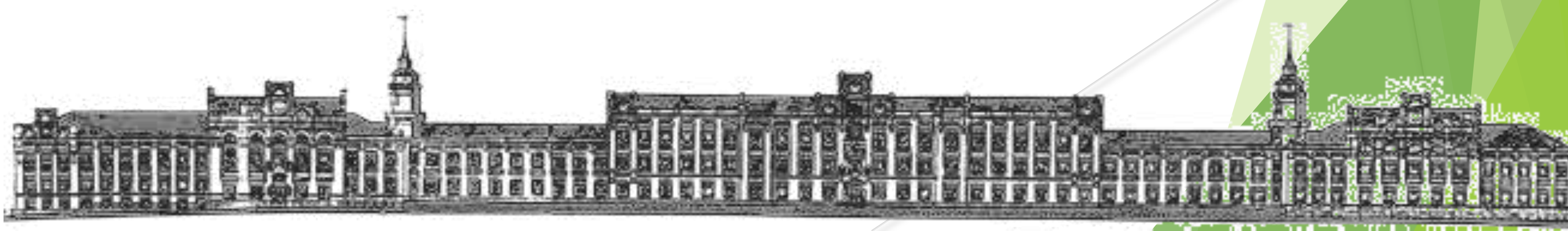
National Technical University of Ukraine
“Kyiv Polytechnic Institute”

PROJECT ACTIVITY OF IEE NTUU “KPI”



UKRAINE

Ukrainian Population is 45,6 million people

Ukrainian Area is 603 700 sq. kilometers

OVERVIEW NTUU “KPI”

39 bachelor’s, 92 master’s, 82 Ph.D. programs

~ 25 300 students

The largest producer of engineers in Ukraine

25 % students of technical universities of Ukraine are students of NTUU”KPI”

STAFF
NTUU “KPI”

The NTUU "KPI" Community includes:

Professors	~ *520*
Associate Professors	~ *1500*
Senior Lecturers	~ *500*

Students:

Undergraduate students	~ *16900*
Post-graduate students	~ *7500*
PhD students	*855*
Total	~ *25300*

NTUU "KPI" REPRESENTS UKRAINE IN INTERNATIONAL ORGANIZATIONS

EUROPEAN COMMISSION

BRITISH COUNCIL

Centre national de la recherche scientifique

Francophonie
Міжнародна організація співробітництва франкомовних країн світу

NATO OTAN

UNDP

WIPO
WORLD INTELLECTUAL PROPERTY ORGANIZATION

SI. Svenska institutet

UNESCO Chair
in Higher Technical Education, Applied System Analysis and Informatics

uran
connected to
GEANT2

JETRO
Japan External Trade Organization

JICA

Eurasian Association of Universities

KOICA 한국국제협력단
KOREA INTERNATIONAL COOPERATION AGENCY

ICSU CODATA

JAPANFOUNDATION

GOETHE-INSTITUT UKRAINE

Sida

Salzburg Global Seminar

CEPIS

Українська Рада Миру

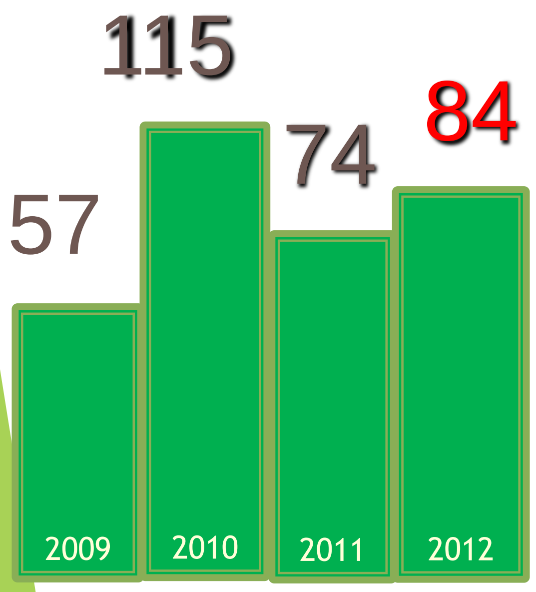
UNESCO

UNIDO

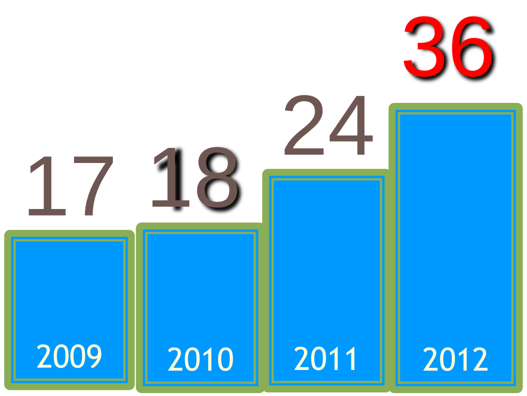
DAAD
Deutscher Akademischer Austausch Dienst
German Academic Exchange Service

EDNES

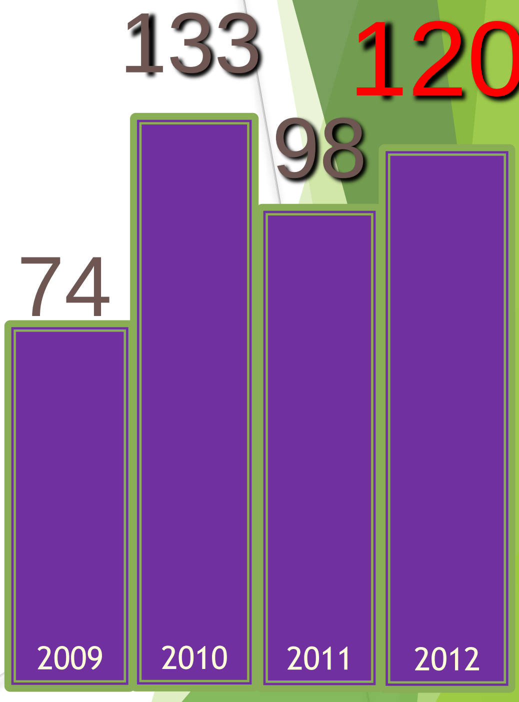
NUMBER OF INTERNATIONAL PROJECTS IN NTUU “KPI”



Research



Education



Total


Spring
Winter
Summer
Autumn

INSTITUTE FOR ENERGY SAVING AND ENERGY MANAGEMENT

(IEE)

NTUU “KPI”

НТУУ «КПІ»
1946
IEE
Інститут енергозбереження та енергоменеджменту

Structure of IEE NTUU “KPI”:

Departments

1. Electric Power Supply Department
2. Heat Power Engineering and Energy Supply Department
3. Automation Control of Electrotechnical Equipment Department
4. Electromechanical Equipment of Powerful Installations Department
5. Geotechnical Construction Department
6. Geotechnologies and Engineering Ecology Department

Centres

- Training Centre for Energy Management
- Sustainable Energy Development
- R&D Institute for Automation and Power Engineering "Energia“

- Address: 115 Borshagivska Str., Kyiv, 03056, Ukraine
- Phone: +380 44 406 86 07 Fax: +380 44 406 85 14
- e-mail: http://www.kpi.ua/kpi_iee
- http://io.iee.kpi.ua/, http://iee.kpi.ua/en/

- Director of the Institute:
- Prof. Sergii Denysiuk

Previous programs and projects

- Demand Side Management (**Hagler Baily Inc.**, USA, **USAID**) - 1995-1996
- Energy Metering in Energy Market Environment (**KEMA ECC**, Holland) - 1996
- Establishment of a Training Centre for Energy management. **TACIS** Project EUK9406 (with **COWI Consulting Engineers and Planners**, Denmark and **March Consulting Group**, UK) - 1995-1997
- Energy Efficiency in Industry (**Berns & Roe Inc.**, USA, **USAID**) - 1998
- DSM - 95, 97. International Conferences on Demand Side Management. **BISTRO** Projects.
- **TACIS** Project EUK9701: Strengthening Energy Management Training Actions throughout Ukraine (**NIFES Consulting Group**, UK, **March Consulting Group**, UK, **Tebodin Consultants & Engineers**, Holland).
- Modernisation of Heating. **Grant of the Danish Government**
- Energy Efficiency at Primary and Secondary Schools. **BISTRO** Project BIS/97/005
- INCO- COPERNICUS Program. Project "**DEMOSOLAR EAST-WEST**"
- EU-BSEC Energy and Climate Policy Network. EU-Project (SSA) **PROMITHEAS-2** (2006-08)
- Power Engineering. EU-Project (7th FP) **PROMITHEAS- 3** (2010-12)

6TH & 7TH EU FRAMEWORK

6 Framework Programme
Term: 2007-2009

Acronym:
PROMITHEAS-2

“EU-BSEC Energy and Climate Policy Network”

- PROMITHEAS-2: Creating a network in the Black Sea region for Energy and Climate Change

PROMITHEAS - 2
The EU-BSEC
Energy and Climate
Policy Network

7 Framework Programme
Term: 2010-2013
National contact points on five thematic priority "Energy"
Project: Transfer of knowledge in the field of energy efficiency and climate change mitigation period 2010-2012

FP7: PROMITHEAS-4

- Title: “Knowledge transfer and research needs for preparing mitigation/adaptation policy portfolios”
- Type: FP7 (ENV – Cooperation, Contract No. 265182)
- Duration : Three (3) years (2011-2013)
- Budget : 961,455.00. Euros
- Partners: 16 Institutes - 14 countries
- Beneficiaries: Twelve countries (*Albania, Armenia, Azerbaijan, Bulgaria, Estonia, Kazakhstan, Moldova, Romania, Russian Federation, Serbia, Turkey and Ukraine*)
- Human resources: 20 Professors, 72 Scientists

NKUA KEPA	NOA	IHS	TUBITAK MAM	SRIE - ESC	UB-FMG	IPE	AUT LHTEE
Financial University	ISPE	PUT	GPOGC	BSREC	ESEMI	KAZIMINVEST	TUT

HORIZON 2020

- Coordinated by Directorate of Strategic Management, Budapest, Hungary

“Supporting transition to Green Economy in the EU’s Eastern Partnership Countries - Green Dialogue”

Topic SC5-14-2014

- Coordinated by the Energy Policy and Development Centre (KEPA) – NKUA

“Identifying climate change mitigation options through a policy dialogue in EU, Associated and neighbouring countries”(PROMITHEAS-14A)

- Coordinated by the Energy Policy and Development Centre (KEPA) - NKUA

“Model platform for enhancing R&I cooperation between the Union and Black Sea region” (PROMITHEAS-14B)

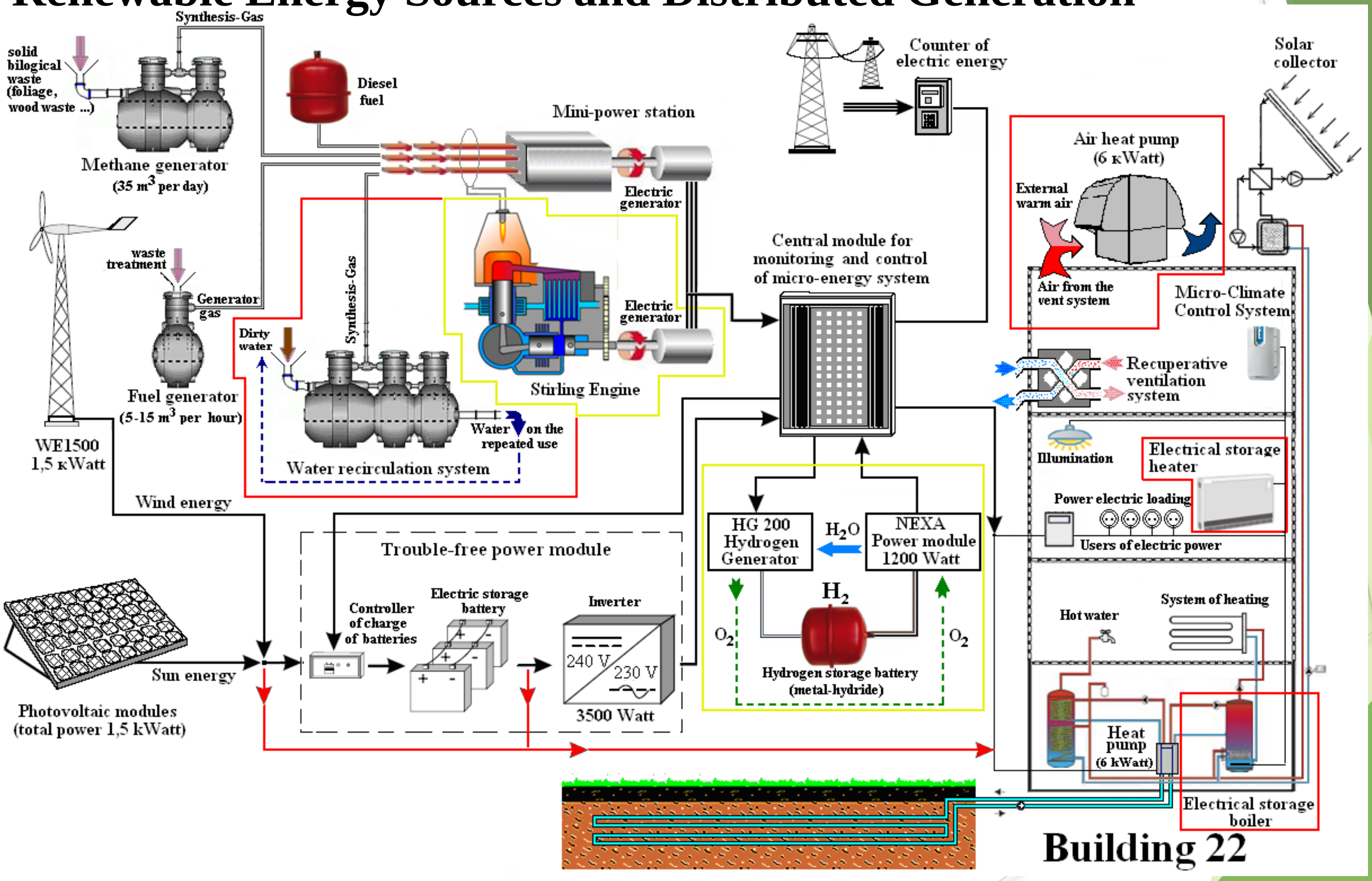
IEE NTUU “KPI” : R&D, Engineering and Consulting Activities

IEE NTUU “KPI” works in the next directions:

- **Smart Grid Technology;**
- **Demand Side Management;**
- **Energy Market;**
- **Renewable Energy Sources and Distributed Generation;**
- **Smart City;**
- **Smart Building;**
- **Environmental and Energy Management System;**
- **Sustainable Energy Development;**
- **Climate Change Problem.**

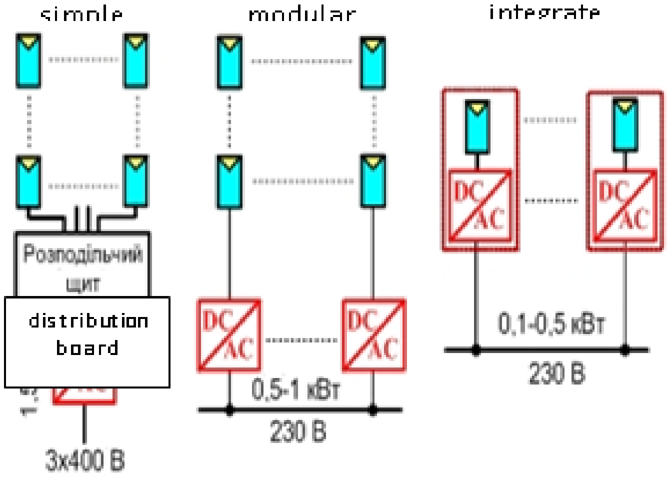
IEE NTUU “KPI” :
R&D, Engineering and Consulting Activities

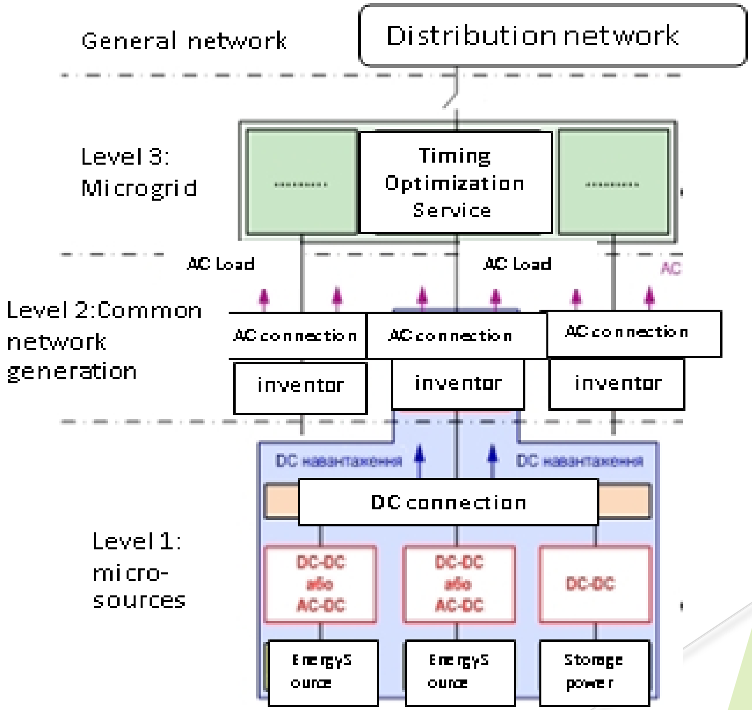
Renewable Energy Sources and Distributed Generation



IEE NTUU “KPI” :
R&D, Engineering and Consulting Activities

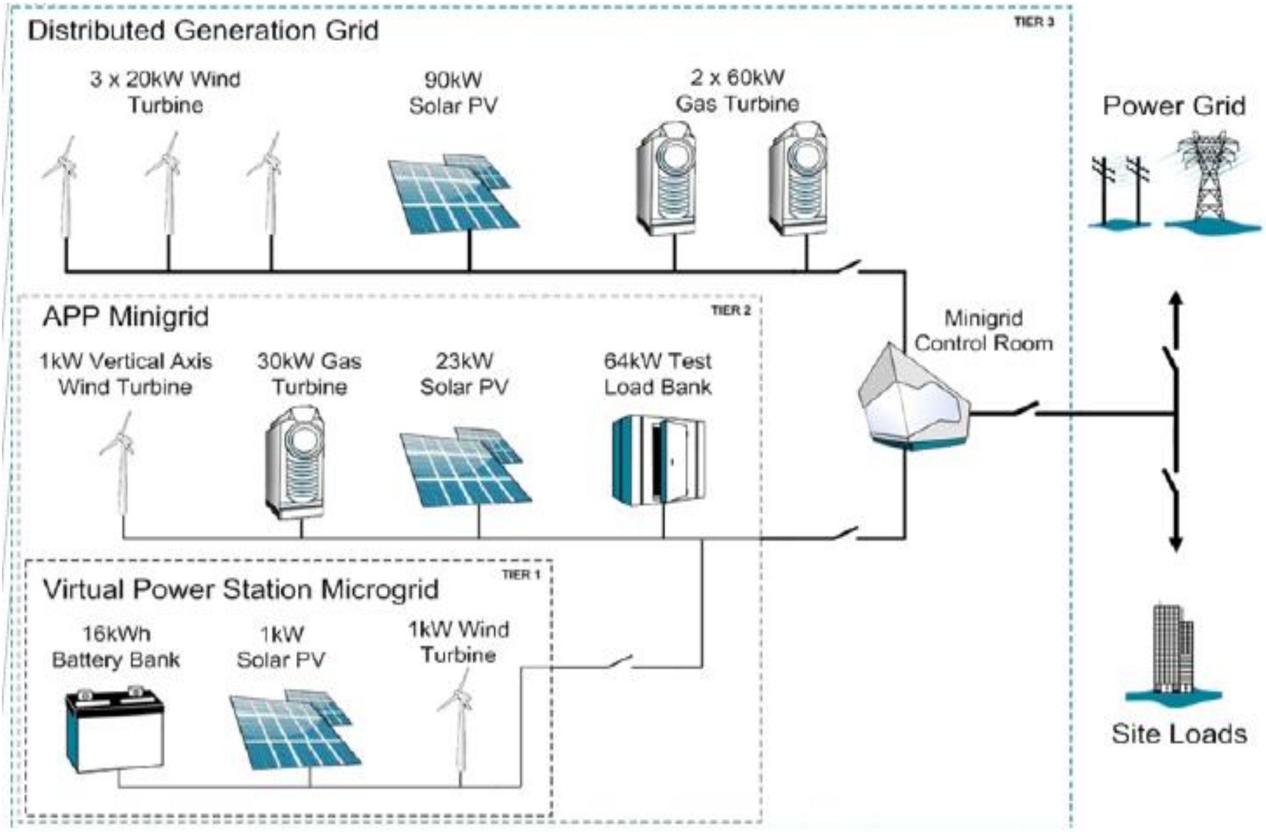
Renewable Energy Sources and Distributed Generation





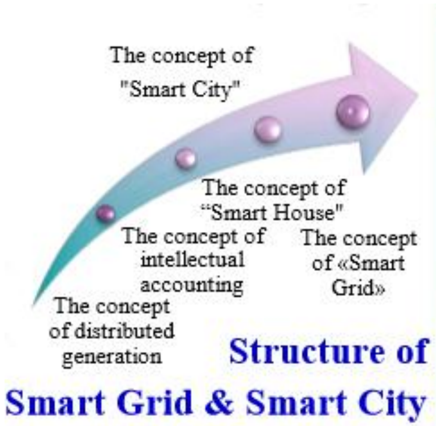
IEE NTUU “KPI” : R&D, Engineering and Consulting Activities

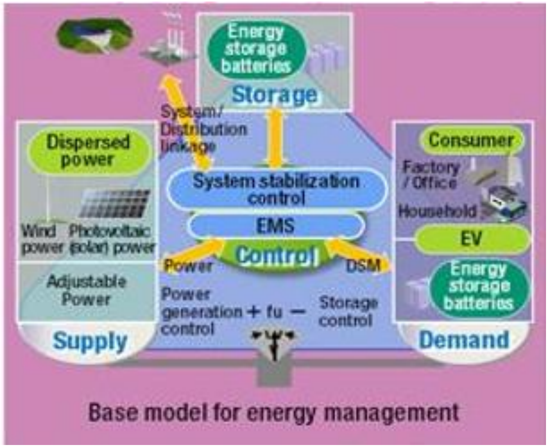
Distributed Generation Grid



IEE NTUU "KPI" : R&D, Engineering and Consulting Activities

Smart City





SEQUENCE FOR THE IMPLEMENTATION OF THE DEVELOPED CONCEPT

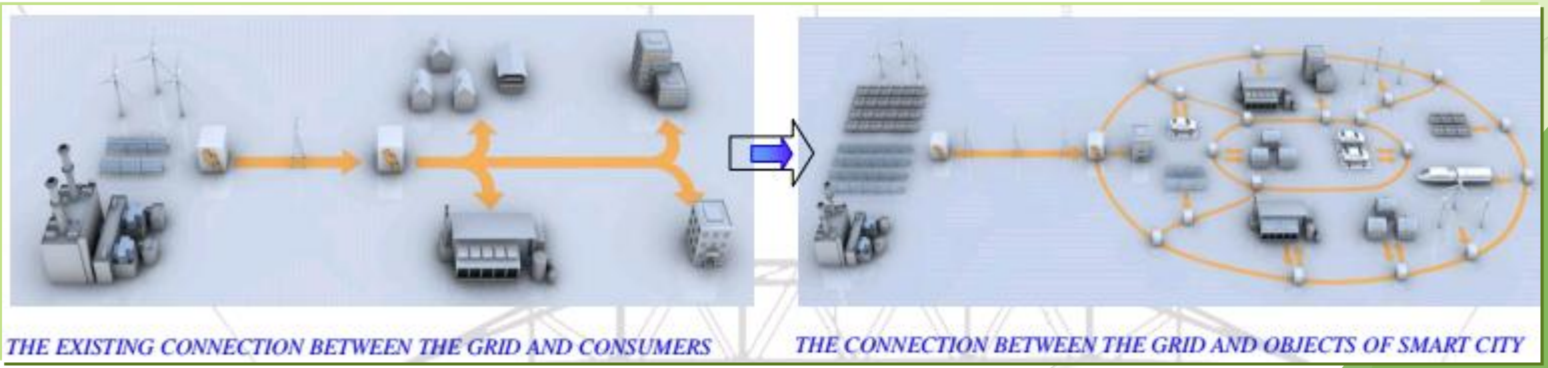
Acceptance of the concept of smart cities (energy component)

Evaluating capacity and energy saving potential of cities

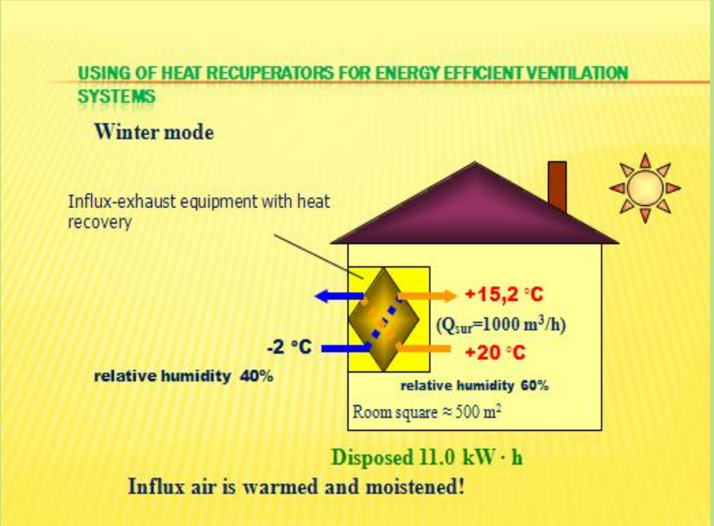
Development of recommendations for the implementation of existing energy resources potential

The development and adoption of local development programs for the implementation of available energy resources potential

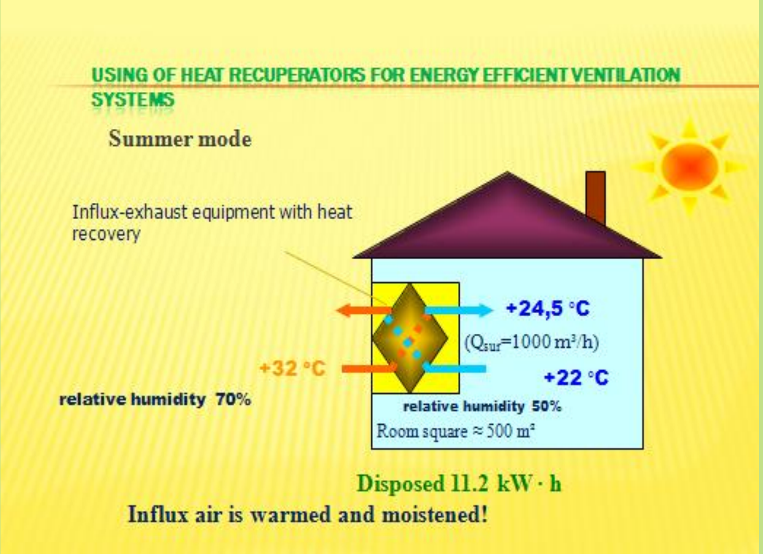
Implementation of the program



IEE NTUU “KPI” :
R&D, Engineering and Consulting Activities



Energy efficient buildings



IEE & sustainable development

1. Development of environmental monitoring.
2. Creation of mobile laboratory for E&E audit (portable equipment for energy audit have already set).
3. Forming training modules for sustainable energy development, E&E monitoring and management, information programs for schools and population.
4. Development training and information dissemination procedures on the web-based technologies in order to involve different types of users.
6. Evaluation of renewable energy potential of Ukrainian regions and presentation this information for public access.
7. Development of the projects and general concepts for Smart Grid, Smart City and implementation it's for Ukrainian conditions.

Research areas

Specialty “Energy management”
Integrated energy management system according to ISO 50001
Energy management systems for industrial and municipal facilities based on the concept of Smart Grid
Energy management system for optimization of production, distribution and energy usage
Integrated systems of environmental and energy management
Innovative energy-saving technologies and energy efficiency in industry
Integrated control for energy saving in enterprises
Liberalized energy markets

Research areas

Specialty “Electrotechnical systems of electrical consumption”
Intelligent information technologies in Power engineering
Systems of intelligent power engineering (Smart Grid)
Distributed generation in electrical supply systems
Intelligent electrical networks and systems
Management of industrial electrotechnical systems and complexes
Management of local and municipal power systems and electrical supply

Power Supply Department

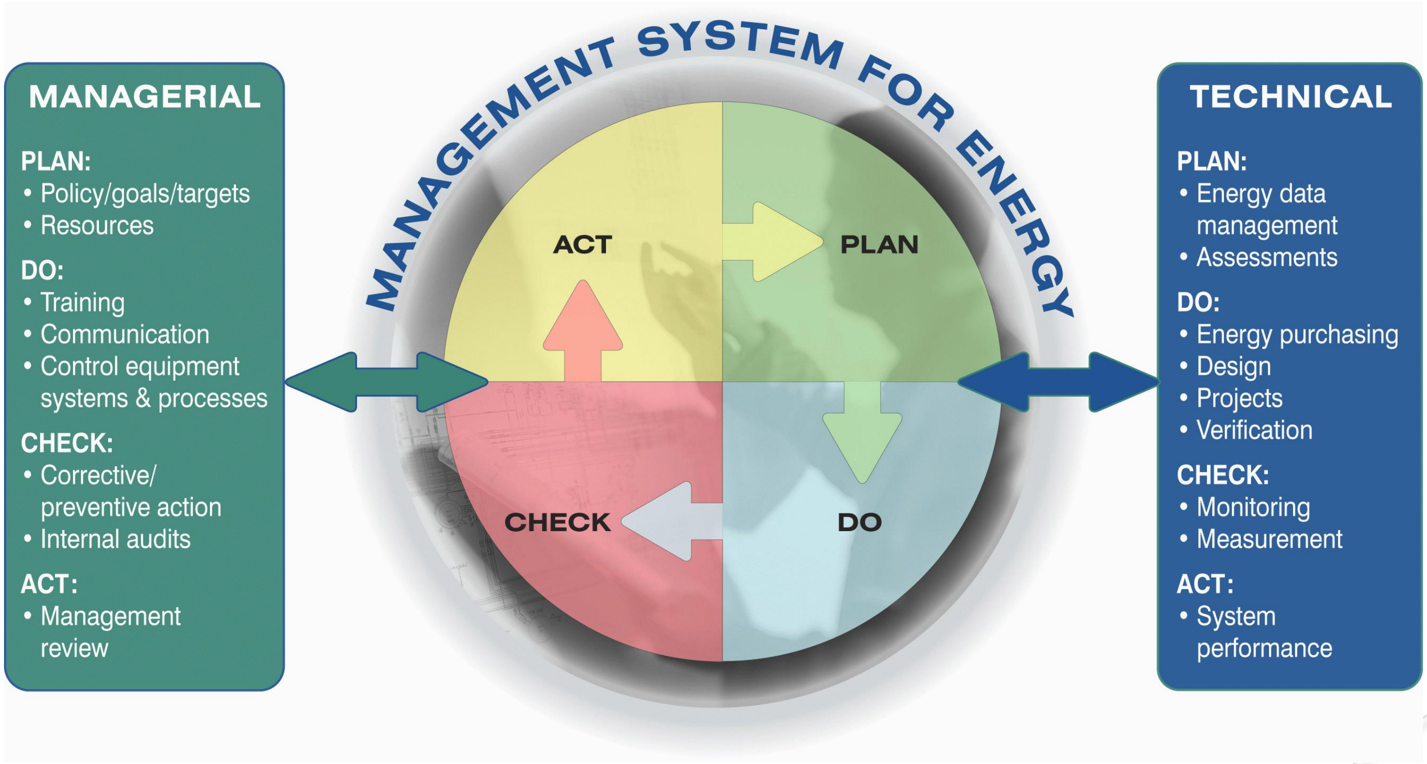
Intelligent information technologies in power engineering

Integrated energy management system according to ISO 50001

Intelligent electrical energy systems (systems of Smart Grid)

Integrated systems for power supply with renewable energy resources

IEE NTUU “KPI” : R&D, Engineering and Consulting Activities



THANK YOU

FOR YOUR

ATTENTION!!!