

Smart Energy Strategies

City of Litoměřice, Czech Republic

How to build Smart Energy Regions

Karlsruhe/Ettlingen

4 – 5 July 2016



Czech Republic

- 24 000 inhabitants
- Established: 1225
- Member of Healthy Cities (CZ)
- Member of Energy Cities (EU)

GERMANY

Teplice

Ustí nad Labem

Liberec

Harrachov

Karlovy Vary

Praha

Hradec Králové

Pardubice

Pilsen (Plzeň)

Rokycany

Příbram

CZECH REPUBLIC

Krnov

Ostrava

Haviřov

Olomouc

Frydek-Místek

Tábor

Havlíčkův Brod

Prostějov

Šumava

Telč

Brno

Kroměříž

Zlín

České Budějovice

Český Krumlov

Uherské Hradiště

SLOVAKIA

AUSTRIA

Vienna (Wien)

Bratislava

History of energy management activities

- **2000 - Support of solar thermal collectors - citizens**
- **2011 – Energy manager (supported by ext. project)**
- **2012 – Strategic Development Plan 2030**
- **2013 – Municipal Energy Plan 2030 (MEP)**
 - **EPC**
 - **Low-energy refurbishment**
 - **PV system**
 - **Energy Saving Fund**
 - **Monitoring and evaluation**
- **2016 -2017 - SEAP**

Strategic and Energy Planning

PLAN

STRATEGIC
DEVELOPMENT PLAN
2030



MUNICIPAL ENERGY
PLAN
2030

GOAL

LITOMĚŘICE 2030
ENERGY
INDEPENDENT
MUNICIPALITY WITH
HIGH QUALITY OF LIFE



LITOMĚŘICE 2030
20% ENERGY SAVINGS

PRIORITIES

1. ECONOMY
2. ENVIRONMENT
3. HEALTH
4. ENERGY
5. GOVERNANCE



1. EN. EFFICIENCY
2. RES
3. AWARENESS

Low-energy refurbishment



- Complex refurbishment preferred by partial measures
- Long – term approach to refurbishment and use of buildings

- U_{em,N}

Heat consumption
31 kWh/(m².rok)

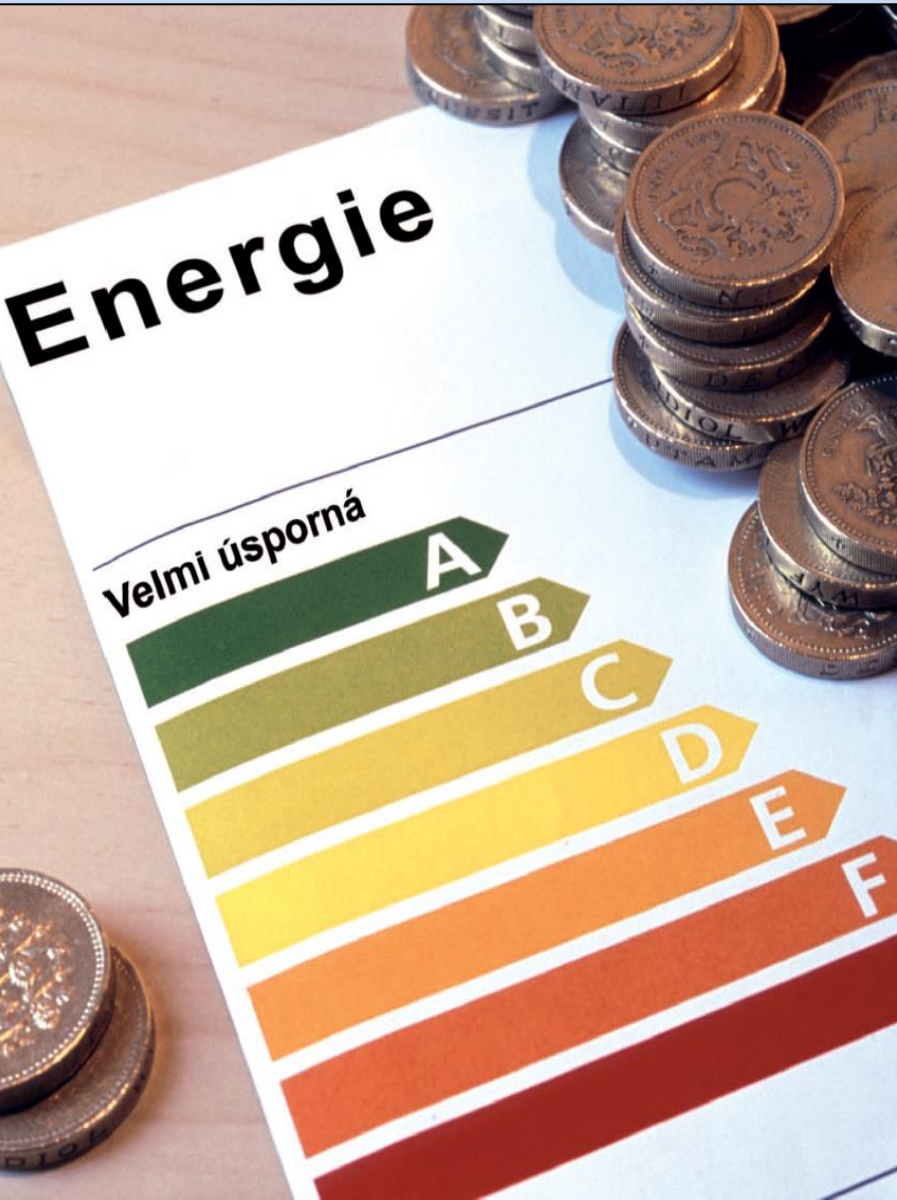
- U_{em,N} (kWh/(m².rok))
- Supported by OP Environment 50%

Photovoltaic



- **3 buildings (school, kindergarten)**
- **80 kWp**
- **Payback time 8-10 years, net benefits 150.000 EUR**

Municipality Energy Saving Fund



- Long term financial source
- Motivation to municipal organizations
- Start in 2014
- Distribution
 - 30% energy saving fund
 - 30% municipal organization
 - 35% municipal budget
 - 5% energy manager

Monitoring and Targeting

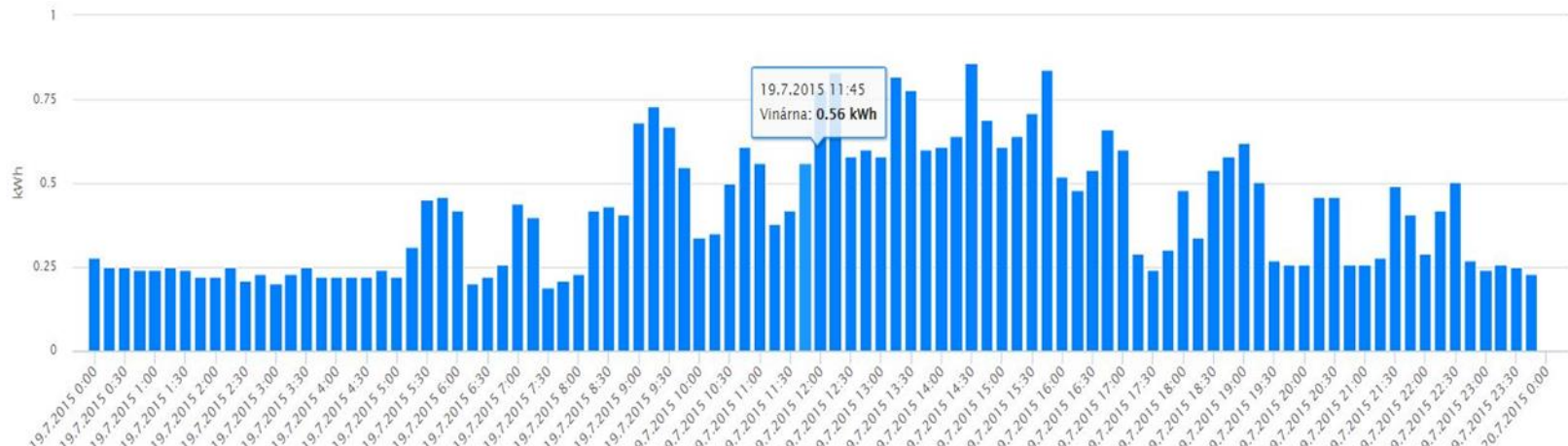
MĚSTO Hlavní strana Dokumenty Přehled akcí Budovy **Přehledy a grafy** Uživatelé

ENERGETICKÉ A FINANČNÍ UKAZATELE

SPOTŘEBA	SEKTOR	BUDOVA	co filtrovat?	TYP MĚŘIDLA	MĚŘIDLO	AKCE
AKTUÁLNÍ SPOTŘEBY	administrativa	CŠJ Máchovy schody		elektroměr	Gotický hrad	GENEROVAT
MEZIROČNÍ POROVNÁNÍ	jiné	CŠJ Svojsíkova		studená voda	Vinárna	EXPORT
DLOUHODOBÁ ČASOVÁ ŘADA	sportovní zařízení	Divadlo K.H.Máchy				TISK
MĚRNÁ SPOTŘEBA	školství	Dopravní hřiště				
	veřejné osvětlení	Dům dětí a mládeže				
		Dům Kultury				
		FOD Klokánek				
		Fotbalový stadion				
		Gotický hrad				


Zobrazit v jednotkách: kWh

Litoměřice | Gotický hrad | Vinárna | aktuální spotřeby | spotřeba elektřiny | 15-ti minutové hodnoty



Self Assessment



- Data availability – EM system since 2012
 - Communication through Strategic team
 - Tools for evaluation (EM tool, smart meters)
 - Successful and well promoted pilot actions
 - Motivation – energy saving fund
 - Report to City Council each year
 - Qualitative criteria for tenders (blower-door test)
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- Better communication to municipal organizations
 - Deeper understanding of EE, RES by colleagues
 - Promotion of non – energy results (side-effects)

Conclusions/recommendations



- Stronger support of strategic and energy planning on the local level (no CoM support point)
- Better education in EE and RES topics for relevant stakeholders
- Promotion of EU strategies and tools for sustainable energy – involvement in EU projects
- Support/promotion of pre-project activities
- Concrete examples of successful projects and their transferability
- Stronger enforcement of indicative goals



Jaroslav Klusák
Energy manager



LITOMĚŘICE

Zdravé město
a místní Agenda 21



Municipality of Litoměřice

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1 OSN o nás ví, vy ne?

