



Fuel poverty from a small country perspective: what we do in Croatia

Julije Domac, Ivana Loncar

Renewable Energy Solutions Addressing Fuel Poverty

Tuesday 14th June 2011

The Oculus Conference Centre, Aylesbury

What is fuel poverty?

- Croatian dictionary - term does not exist
- Traditionally, not an issue in Croatia
- Energy as a part of 'public service'
 - Fixed prices
 - Guaranteed supply
 - 'Every citizen right!'
- Many things changed since 1991...



What has changed?

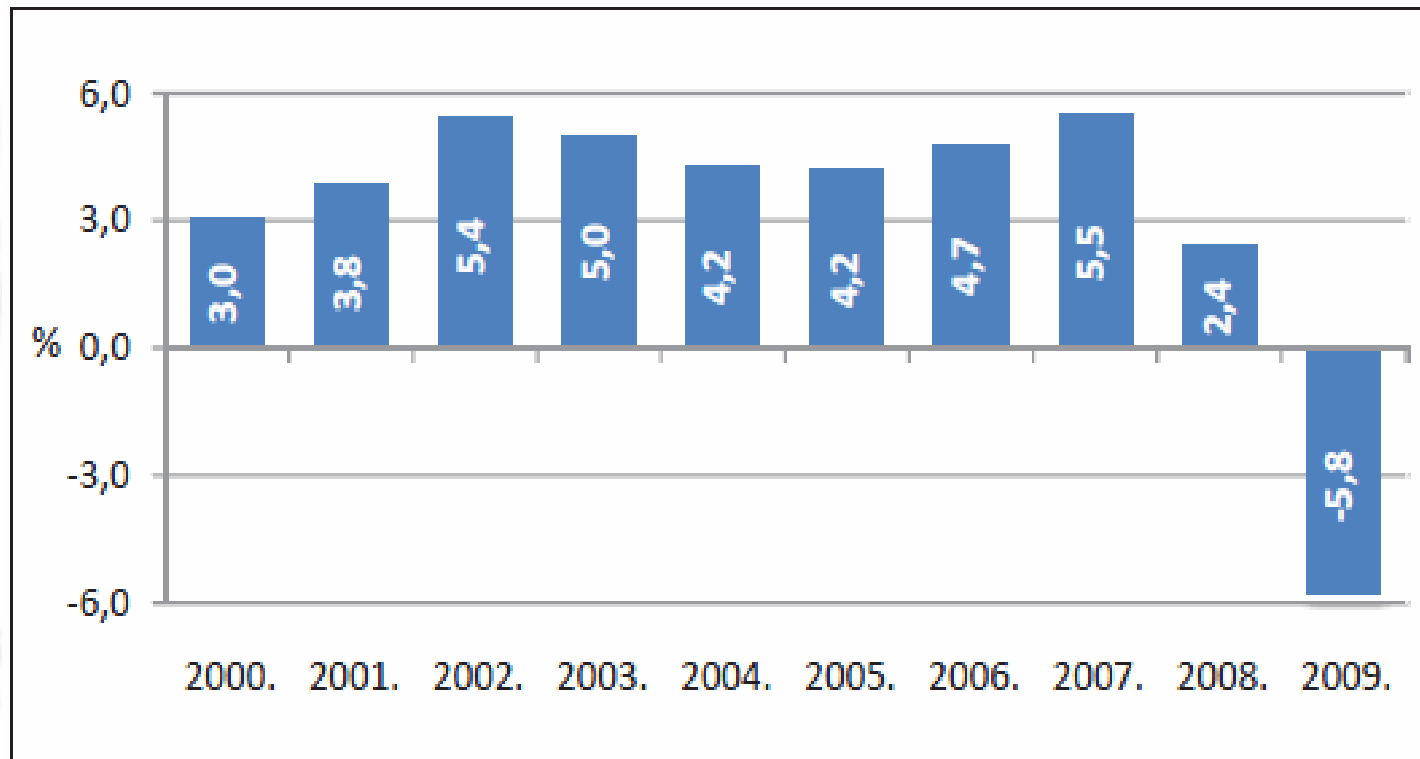
- New energy legislation from 2001 – market liberalisation
- Economic problems since 2008:

Croatian economy in 2010	
GDP, real growth rates in %	-1,2
GDP per capita, EUR	10.380
Net wage and salary, in HRK	5.343
Unemployed persons	308.869
Unemployment rate, %	17,6



GDP growth in Croatia

- Future is not looking promising...



Fuel poverty in 2011

- UK definition - spending more than 10% of disposable income on energy
- Is this an issue for Croatia or not?
- Analysis conducted in May 2011
- Face to face survey
- Zagreb vs. rural regions
- Electricity and heating costs (gas, fuel oil,...)



Results – Case study 1

- Private home of 200 m² in Zagreb
- 4 members family
- 2 members employed - monthly income does not exceed 12.000 kn
- Annual energy expenses: 17.350 kn
- Total energy costs around 11% of their total income
- **Fuel poverty!**



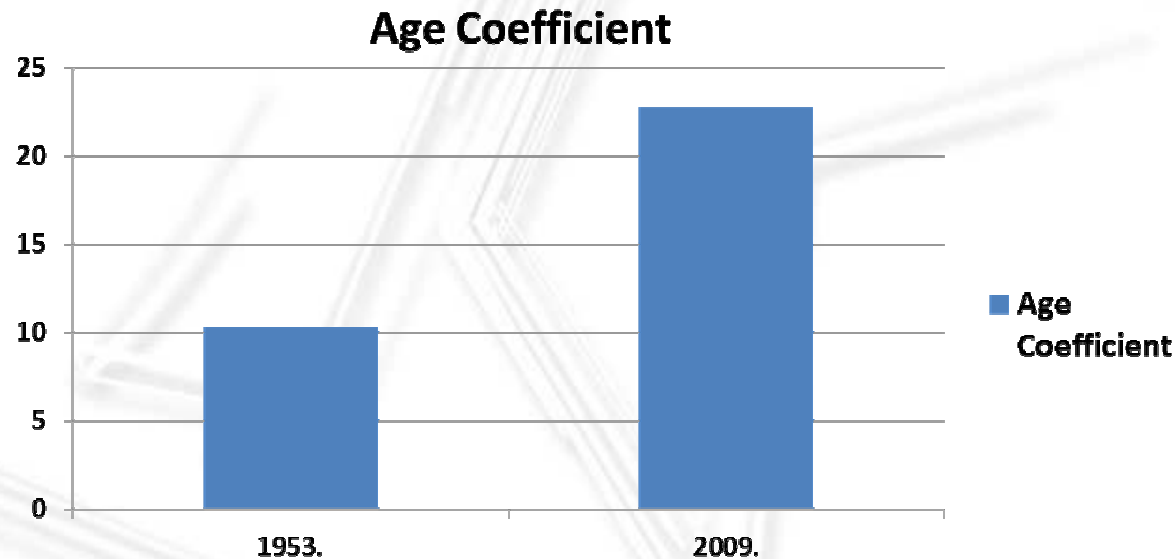
Results – Case study 2

- House of 57 m² in Bjelovar
- 1 pensioner – monthly income does not exceed 1.700 kn
- Annual energy expenses: 4.000 kn
- 19,65% of total income on energy related expenses!
- **Fuel poverty!**



Ageing population...

- Ratio of active workers and pensioners 1:1,23
- 1.207.192 retired in Croatia!
- Growing percentage of population aged 60 and over in total population



To conclude...

- Fuel poverty in Croatia: high energy prices, low income and energy (in)efficiency of buildings
- People living in houses already face fuel poverty
- 65% of population living in houses
- Ageing population with negative growth rate
- People living in buildings/apartments – energy expenses represent less than 3% of their disposable income



Actions needed! Examples!

- High energy prices → renewable energy
- Energy efficiency → house insulation
- Public awareness campaigns and actions



I JA MOGU IMATI SOLARNE KOLEKTORE !!!

Karlovačka županija i Fond za zaštitu okoliša i energetska učinkovitost objavljuju javni natječaj za podnošenje prijava fizičkih osoba za sufinanciranje ugradnje solarnih sustava.

Sufinanciraju se troškovi opreme i ugradnje solarnog kolektorskog sustava u 60 % iznosa u iznosu od 40%, (do maksimalno 12.000 kn po kućanstvu).

Kada za podnošenje prijave: **15. svibnja 2009.**

Ministarstvo energetike, obnovljivih izvora i učinkovitosti
Regionalna energetska agencija - MORAVSKI OKOLJE
REGIONALNA ENERGETSKA AGENCIJA MORAVSKI OKOLJE
REGIONAL ENERGY AGENCY

19. travnja 2011.

Energetski dan
Zagrebačke županije

Obilazak i prezentacija „zelenih“ projekata Zagrebačke županije 10:00-13:30
Opatovci

Radionice u osnovnim školama Zagrebačke županije 10:00-11:30
Osnovna škola Dragutina Domjenca - Sveti Zelim, Osnovna škola Pušća, Osnovna škola Jelovlje

Sajam obnovljivih izvora energije i energetske učinkovitosti 17:00-19:00
Trg Stjepana Radića, Velika Gorica

ZAGREBAČKA ŽUPANIJA

VG Poduzetnički centar d.o.o.

REGIONALNA ENERGETSKA AGENCIJA MORAVSKI OKOLJE
REGIONAL ENERGY AGENCY

I JA MOGU IMATI SOLARNE KOLEKTORE !!!

Krapinsko-zagorska županija objavljuje javni natječaj za podnošenje prijava fizičkih osoba za sufinanciranje ugradnje sustava za korištenje obnovljivih izvora energije.

Natječaj traje od 15. srpnja 2010. do 15. srpnja 2010.

Kada za podnošenje prijave: **15. srpnja 2010.**

Ministarstvo energetike, obnovljivih izvora i učinkovitosti
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Introducing the main actor...

- IEE 2006 Call
- Four founding authorities



- Arc-de-Seine (Partner, local agency)
- TV Energy - SE England (Menthor)



Area: 8500 km²

Population: 1.3 million

4 counties, 21 towns, 68 municipalities

From a good idea to a national success

- First all launched 15 March 2009 for 60 households
- Up to 40% / max 12.000 kn (£1.430) per household
- Shall we have enough applications?!
- More than 150 applications received



I JA MOGU IMATI SOLARNE KOLEKTORE !!!

Karlovačka županija i Fond za zaštitu okoliša i energetska učinkovitost objavljuju Javni natječaj za podnošenje prijava fizičkih osoba za sufinanciranje ugradnje solarnih sustava.

Sufinanciraju se troškovi opreme i ugradnje solarnog kolektorskog sustava u dotična čistoća a iznose od 40% (do maksimalno 12 000 kn po kućanstvu).

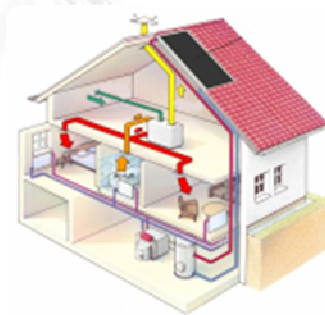
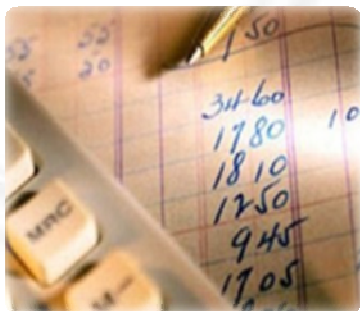
Kako podnijeti prijavu: **15. svibnja 2009.**

Više informacija o natječaju možete pronaći na www.karlovacka-zupanija.hr i www.fond-zo.hr.

A cartoon illustration of a farmer wearing a straw hat, a white shirt, green overalls, and orange boots. He is standing on a roof with solar panels and pointing towards them with both hands.

How to select?

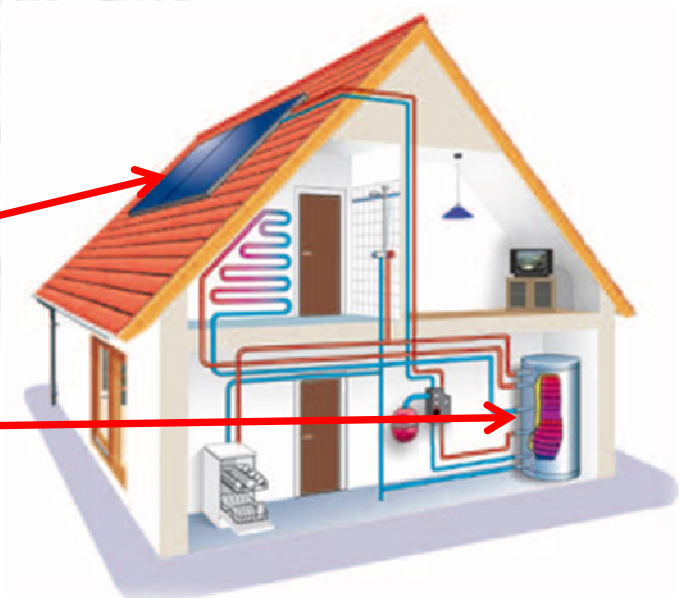
- Application form (questionnaire)
- Techno-economic criteria
 - Building characteristics (insulation, windows, roof)
 - Overall efficiency of heating/cooling system
- Social criteria
 - Number of users



What can be financed?

Total costs of solar thermal collector/equipment and installation:

- a) Solar collector
- b) Heat buffer
- c) Other equipment



From 2010 – pellet/biomass stoves, PV systems, heat pumps, small wind turbines



Others followed soon...

- Zagreb County – 1st Call launched 1 July 2009
- Krapina County – July 2009
- Primorska County - June 2010
- City of Zadar - September 2010
- Konavle Municipality - October 2010
- Dubrovnik County - May 2011
- City of Zagreb - June 2011
-  Jelsa Municipality - July 2011....

...significant results achieved!

- More than 1000 households so far
- National and international recognition
- EUSEW – Local Energy Award 2011



I can have a warm home!

- Programme started in May 2011
- construction / improvement of the building envelope cofinanced by 15% of investment to a maximum of 12.000 Kn
- installation of energy efficient windows and doors cofinanced by 15% of investment to a maximum of 6.000 Kn



04.-09. travnja 2011
www.zagreb-energyweek.info



Zagrebački energetski tjedan



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