

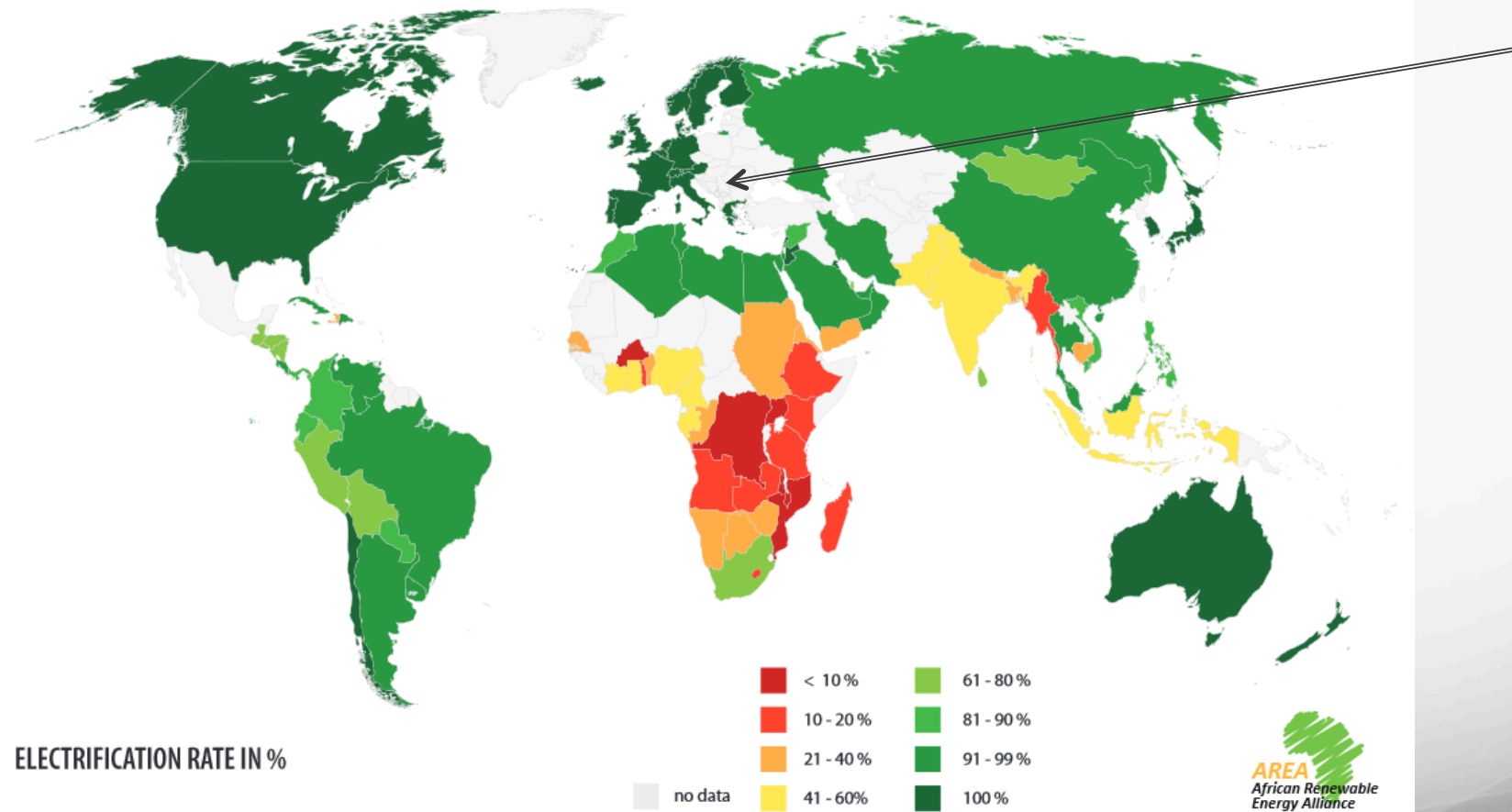


RURAL ELECTRIFICATION, LEGISLATION AND ITS IMPACT ON MINORITIES: CASE STUDY SERBIA

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World Electrification Rate

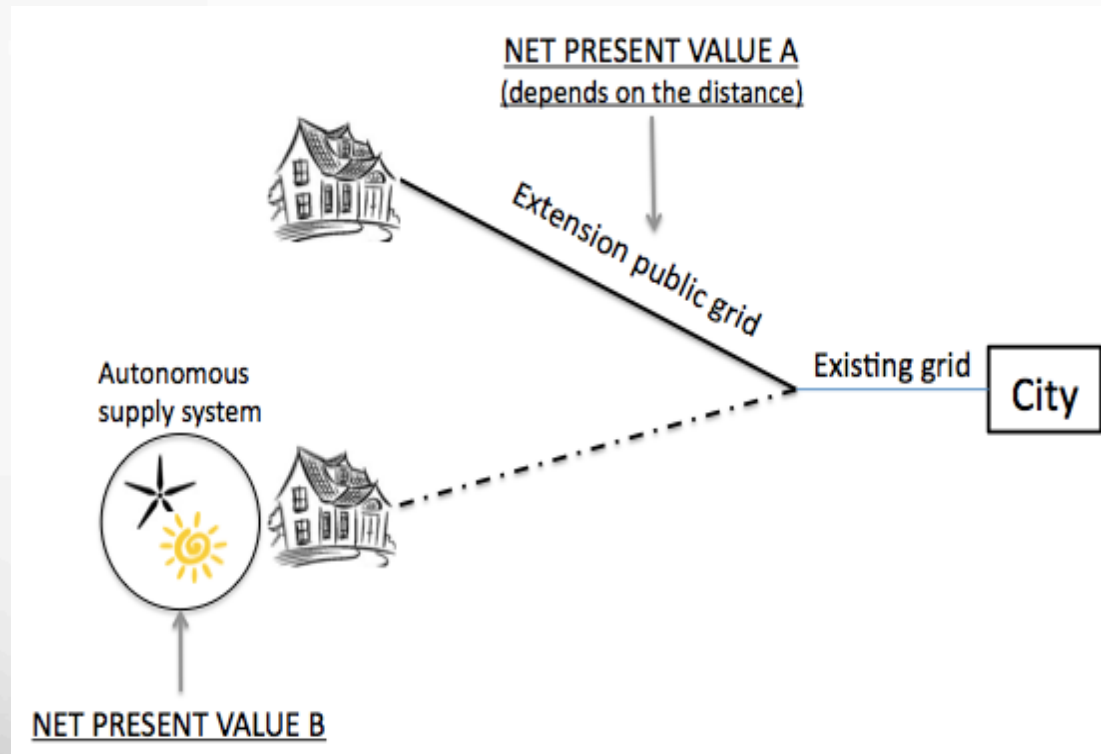
Source: UNDP Human Development Report 2007/2008



BACKGROUND

- 43% of the Serbian population live in rural areas
- Electrification rate in Serbia is higher in urban areas than in rural areas and lower in poorer households (rural-urban gap)
- Income level of affected families is very often below the poverty level, resource prices continually rise (e.g. for powering diesel generators)
- Minorities are generally affected by several dimensions of poverty. Energy poverty is an issue for minorities especially when it comes to rural areas (social marginalization)
- Energy self-sufficiency in remote regions in Serbia could empower minorities to facilitate their access to education, employment and to eradicate poverty and improve health

CASE STUDY - SERBIA



- Empirically determined load profiles for 2 model regions in Serbia
- NPV (investment costs, O&M-costs)
- 30-year lifecycle
- Scenarios: Line connection, CO₂ price, electricity price, diesel price, inflation, interest rate

CASE STUDY - SERBIA

Isolated grid supply is very often an economically preferable option even in the case of short distances

Table 1. Scenario 1: Distances meeting an equal Net Present Value for the supply alternatives (i) extension of the public electricity grid and (ii) establishment of an isolated grid solution

Yearly consumption	10 MWh / year	5 MWh /year
Grid connection		
Overhead low voltage lines with wooden pylons	1.71 km	1.31 km
Overhead low voltage lines with concrete pylons	1.38 km	1.03 km
Underground middle voltage lines	0.69 km	0.44 km

(Scenario1) is a moderate annual increase in CO2 prices (8%), electricity prices (2%) and diesel prices (2%) and a slight annual increase in inflation (2%) and interest rates (2%)

LEGISLATION - RIGHT TO ELECTRICITY

EUROPEAN UNION:

Energy supply is a service of general public interest (SGI)



Market liberalisation

Principle of subsidiarity → Differences among the Member States in terms of quality level, sectors concerned, organisation and terminology



*„[...] high level of quality, safety and affordability, equal treatment and the **promotion of universal access and of user rights.**“ (Additional Protocol 26, TFEU)*

*“Member States shall ensure that all household customers [...] enjoy **universal service, that is the right to be supplied with electricity** of a specified quality within their territory at reasonable, easily and clearly comparable, transparent and non-discriminatory prices. [...] (Directive 2009/72/EC, Art. 3)*

*[...] Member States [...] shall take measures to **protect final customers in remote areas**“*

LEGISLATION - RIGHT TO ELECTRICITY



GERMANY:

Germany states in its Energy Law that the supplier of last resort is not obliged to provide universal service in case that the supply is not reasonable for economic reasons (Energiewirtschaftsgesetz).



AUSTRIA:

*„[...] Electricity traders and other suppliers [...] shall be obliged [...] to deliver electricity to consumers [...] and small businesses that claim their right to be supplied with electricity (**obligation to provide universal service**)” (EIWOG)*



CROATIA:

Zakon o trizstu elektricne energije: It is the interest of the Croatian State to provide electricity, which is necessary for the life and work of the citizens (Section 5 (2)).

The electricity supply of household customers is an universal service (Section 61)

Law commits the Croatian State to ensure universal service to the entire Croatian territory (Section 48 (3)).

LEGISLATION - RIGHT TO ELECTRICITY



SERBIA:

2004: First step to harmonize its Energy Law with EU legislation

The current Energy Law was adopted in 2011 and implements the second and only parts of the third EU energy package. It doesn't refer to the right to public supply for remote households to a great extent.

Last amendments of the Serbian Energy Law (currently being debated and didn't enter into force yet) will bring several changes, e.g.: The right to access (Section 166), agreement of access (Section 167) and rejection of access (Section 168).

The current amendment only refers to isolated grids in terms of industrial zones (Section 116).

CONCLUSION – LEGISLATIVE FRAMEWORK:

- EU-legislation underlines the importance of providing all customers with access to electricity, but does not recommend concrete implementation strategies
- The implementation - due to the principle of subsidiarity – is a responsibility of the Member States (differences among the member states)
- Compared e.g. with Austria, Serbia puts a lower emphasis on the right to access electricity (in rural areas)
- Serbia's regulatory framework doesn't refer to rural electrification to a great extent; universal access is not granted under the current law; the currently discussed amendment of the Energy Law does not improve matters.

MINORITIES

- Energy poverty is an issue for minorities especially when it comes to rural areas
- Resource prices continually rise, low income, high unemployment rate
- Various interests of profit orientated utilities / Government (enable universal access to electricity vs. minimize national budgetary burden, increase profits, rural-urban gap)
- Political and economic interests may lead to a preference of development in urban areas
- Decisions about the extension of the public grid generally do not give a priority to the supply of marginalized groups and minorities
 - Energy self-sufficiency in remote regions in Serbia could empower minorities to facilitate their access to education, employment and to eradicate poverty and improve health
 - Increase stability of the society whilst narrowing the gap between urban and rural areas

CONCLUSION

- The establishment of **decentralized energy systems** is very often an **economically** preferable solution to bring electricity to the rural population
- Current **EU legislation** underlines the importance of providing all customers with access to electricity but doesn't recommend concrete implementation strategies
- **Serbia's** regulatory framework doesn't take into account rural electrification issues and doesn't consider the possible impact of rural electrification on existing problems. The currently discussed amendment of the Energy Law does not improve matters.
- **Rural electrification and energy self-sufficiency could assist to answer to existing problems in Serbia** (widening urban-rural gap, increasing marginalization of groups).
- The **legal anchoring** of the target to provide institutional support for the electrification of rural areas and especially for marginalized parts of the population could help to reduce poverty, support and support to change the conditions for rural development in Serbia.



THANK YOU FOR YOUR ATTENTION!

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