

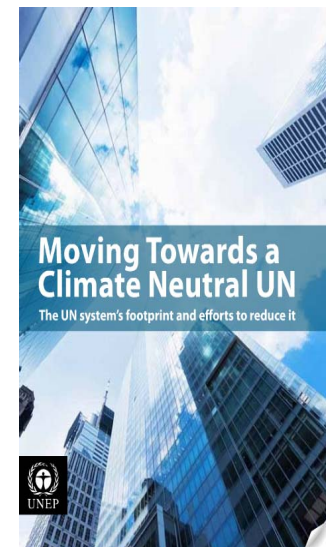
Integrated renewable energy vision – Olovo municipality in Bosnia and Herzegovina



International Energy Efficiency Forum,
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Starting point – identify location

- Size
- Location
- Economic activities and potential
- Unemployment statistics
- Readiness for cooperation
- Locally available natural resources and their potential

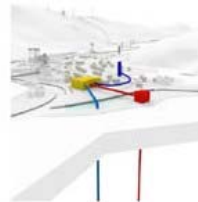


Potential



WIND TURBINES

Source: **Wind**
Energy: **Electricity**
Energy flow: **From installation to electricity grid network (distribution level)**
Location of installation: **Top of the hills**



GROUND SOURCE HEAT PUMP (GSHP)

Source: **Geothermal energy (36°C, drinking water quality)**
Energy: **Heating, possibly cooling**
Energy flow: **From 185 m of the Earth depth to the spa complex and re-injection**
Location of installation: **Next to the spa complex.**



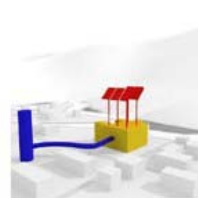
PHOTOVOLTAIC (PVs) SYSTEMS

Source: **Solar power**
Energy: **Electricity**
Energy flow: **From the system to electricity grid network (distribution level)**
Location of installation: **Building roofs; alternatively separate tower construction or ground facing south**



SMALL HYDROPOWER PLANT (SHP)

Source: **Water**
Energy: **Electricity**
Energy flow: **From the plant to the electricity grid network (distribution level)**
Location of installation: **River – places with high water heads**



SOLAR THERMAL SYSTEMS

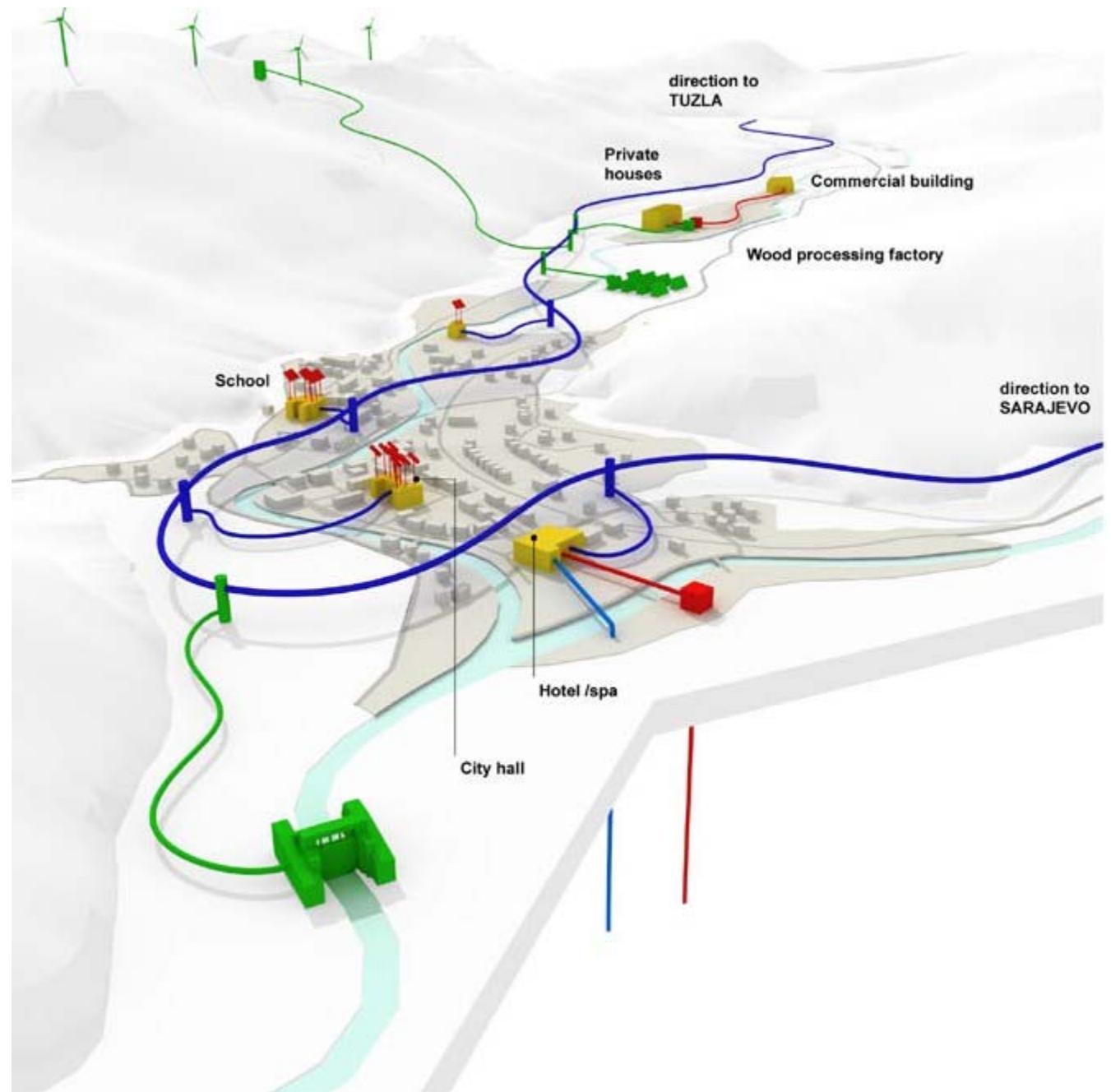
Source: **Solar power**
Energy: **Hot water**
Energy flow: **To the public, commercial and private buildings**
Location of installation: **Building roofs facing south**



COMBINED HEAT AND POWER PLANT (CHP)

Source: **Biomass (wood residues)**
Energy: **Electricity/heating**
Energy flow: **From CHP facility to public/residential buildings and private houses**
Location of installation: **Next to the wood processing factory**

**Bigger
picture**

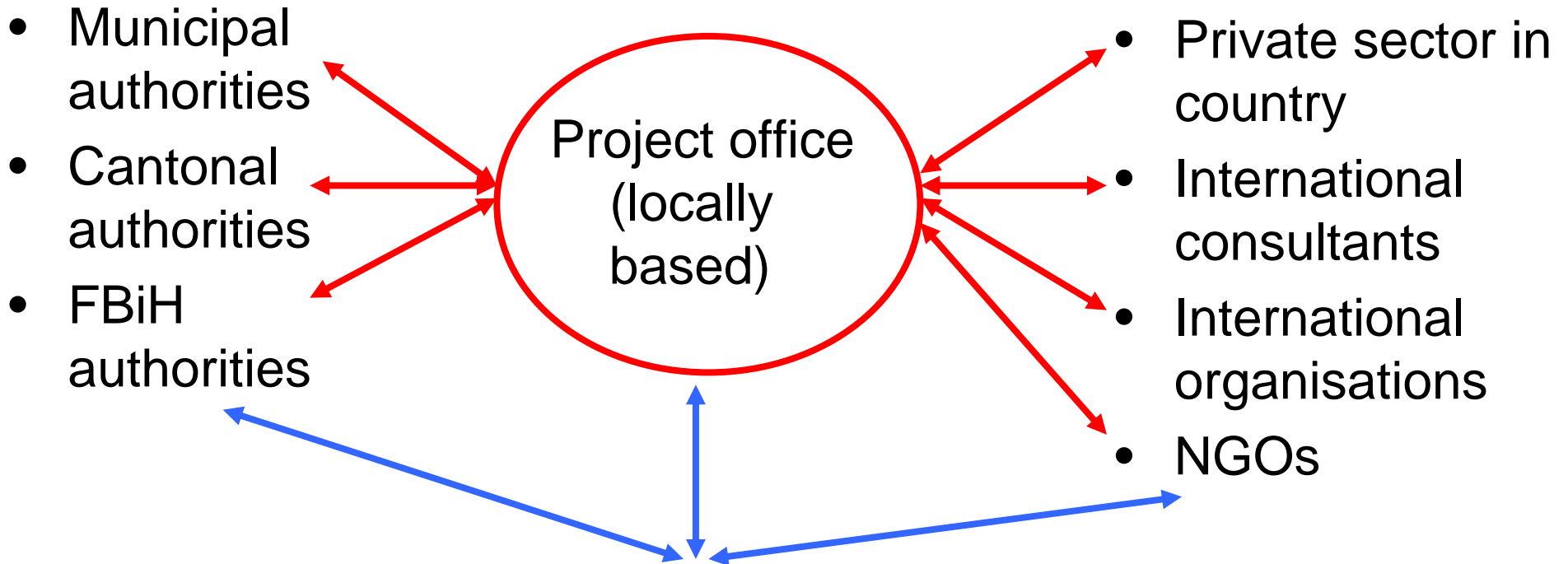


Project phases

1. Identification phase – site selection & establishment of the collaboration mechanism
2. Research phase – research of material and energy flows; existing infrastructure; assessment of energy efficiency; estimation of ghg emissions; analysis of locally available natural resources and their potential; building local capacity
3. Demonstration phase – first small-scale installations; establishment of ee management system; linking activities to other local developments (e.g. tourism)



Cooperation infrastructure & funding



- Municipal authorities
- Cantonal authorities
- FBiH authorities

- Private sector in country
- International consultants
- International organisations
- NGOs

- Revise municipality budget
- Enter dialogue with national authorities, country based donors, international organisations and relevant programmes (e.g. CDM) or private sector
- Analyse the possibility of taking the credit

Project outcomes

1. Improved livelihoods – develop local market of small and medium entrepreneurs of renewable technologies; reduction of energy poverty; job opportunities; tourism development
2. Improved environment – reduced ghg emissions; decreased fossil fuel consumption; reduced waste flows
3. Enhanced education – raised awareness and improved knowledge on climate change, environment and energy; promotion of energy efficiency and renewables
4. Analysed energy policy gaps

Replicability?