

World Bank's activities and aims for DH projects

The experience of Ukraine, Moldova and Belarus.

Presenting achievements, challenges and lessons learned

How to ensure that DH has a future in these countries?

Portfolio overview: DH Investment projects

Belarus:

Biomass District Heating Project (US\$ 90 mil. 2014)

Pipeline: Sustainable Energy Scale-up Project (US\$ 99 mil. + EIB US\$ 99 mil. 2019)

Ukraine:

District Heating Energy Efficiency Project (US\$ 210 mil. 382 originally 2014)

Moldova:

District Heating Efficiency Improvement Project (US\$ 40.5 mil. 2014)

Pipeline: Efficient Combined Heat and Power (US\$ 85 to 100 mil. 2020)

Portfolio overview: DH Investment projects

Type of investments:

Supply-side efficiency and reliability: replacement of old boilers/conversion to CHPs, network reconstruction, installation of auxiliary EE equipment, etc.

Boiler house conversion to other fuel (biomass) and small wood biomass CHPs

Transition to consumer-driven system: individual heat substations, metering

Portfolio overview: Technical assistance

Cover wide range of sectoral topics:

Energy subsidy reform and social protection

Institutional and regulatory reform

Organizational aspects (at operator level)

Commercial aspects (transition to consumer-driven system)

Last but not least: Investment planning

Portfolio overview: Technical assistance

Complementary with investment projects

Informing preparation of new projects

Lessons learned from project implementation applied to sectoral issues

Addressing sector/policy issues which cannot be addressed at project level

Ultimate objective: creating an enabling environment for modernization investments

Historical legacy: common features of DH systems in the three countries

Systems built on very cheap natural gas

Well-developed infrastructure (in terms of coverage) but inefficient

Overcapacity (massive underpricing of energy resulted in inefficient use, and low economic growth has reduced heat demand, especially industrial demand)

Equipment not state of the art, even when built

Supply-driven rather than consumer-driven, low productivity, significant overstaffing

Limited investments and maintenance over the last 25 years (*)

DH in the context of Energy Sector Reforms

Similarities with electricity and natural gas sector

Overcapacity, need for modernization

Underpricing and cross-subsidies embedded in tariffs

Reform push towards market-based pricing

But also major differences

DH does not cover entire population and remains a local service

DH is not amenable to the standard reform prescription

Power and natural gas sector reforms drive the DH sector agenda

DH is faced with competition from other modes of heat provision

To be or not to be? an existential question in transition to market-based environment

The economics of DH services make them vulnerable in market reform

Fixed costs which can be absorbed only with sufficient volume/density of sales

Increased EE and disconnections put downward pressure on heat demand

Risk of negative technical, commercial, financial feedback loop (death spiral)

To be or not to be? an existential question in transition to market-based environment

Energy sector reform can support or undermine DH modernization

Moldova: Moved early with electricity and gas sector reform. Put in place fairly favorable policies for DH (gas pricing for DH vs households, purchase of electricity from CHP)

Belarus: Limited market reforms, but huge support to modernization of DH infrastructure

Ukraine: DH forced to face market pressure with poor infrastructure, constraining institutional and legal environment, and unfavorable economic regulation.

DH services: legacy systems or bridge towards modern urban energy future?



DH services: legacy systems or bridge towards modern urban energy future?

Existing DH infrastructure are mostly 2nd generation

Today they would not be built, or be designed differently

What should be done with them?

- Letting them collapse/continue as is not an option

- Orderly retrenchment instead?

- Moving aggressively towards modern “4th generation” DH?

There is not one good answer: local context matter

Comprehensive DH reform: how to go about it?

Challenges in design and implementation of reform

- Sector seen as lesser priority (electricity and gas)
- Institutional fragmentation: leadership for reform
- National versus local: long term, DH to be managed and regulated at local level, but...

Comprehensive DH reform: how to go about it?

Success and sustainability of DH services will come from bottom-up process...

...but strong and consistent support at national level necessary to create the enabling environment allowing DH to compete.