

Now/New/Next

Urban Energy Transition Insight Series

Developing a **City Energy Bill** to steer city-level investment towards an affordable and just energy transition

How much does your city pay for energy each year? This question often goes unanswered, even as European cities work towards renewable energy goals set out by the EU's Renewable Energy Directive and embedded in their own targets. But add up the total energy spend of a city's inhabitants and businesses spend on energy, and you get a **City Energy Bill**, which can be used as an important policy tool for future energy investment. By understanding the total price paid for energy, cities can make more confident and ambitious strategic investments in clean energy, ensuring that energy becomes more affordable and that the maximum possible generated value stays local.

About Now New Next

The **Now-New-Next** series highlights innovative concepts and trends within the Urban Energy Transition, covering the Political, Economic, Societal, and Technological advances that will be central to local energy transition.



Challenge

- **Affordability is a growing concern for cities delivering the energy transition**, yet the available financials at city scale are not leveraged by cities in decision-making
- **Public expenditure on energy assets (PV, BESS) is often viewed as a cost** – or at best, a cost reduction tool – rather than an local value-driven investment in an affordable energy system
- Without knowing how much money is being spent on energy (heat, electricity, gas) by its citizens, businesses and by their own activities, city-level decision-making for an affordable and clean energy system lacks a key piece of information.



NOW : Energy affordability discussions lack city-wide targets

- At individual project-level, the impact of an investment on energy cost is well understood, with cost reductions being a key enabler of investment decisions (for instance, for self-consumption by PV on public buildings).
- Cities don't yet incorporate data on overall energy spending in their energy and climate strategies, even though **indicative numbers are readily available**.
- While energy affordability and poverty are political priorities for many cities in Europe, **quantitative targets for city-level reductions in energy cost are not yet expressed**.
- However, **the overall impact of investment projects on aggregated city energy costs is not yet calculated**.



NEW : kWh-prices starting to emerge in local energy policy-making

- As self-consumption and energy sharing models allow for cheaper kWh prices for prosumers, **there is growing recognition that publicly-supported local energy investments can improve affordability** and localise financial benefits at city scale.
- In parallel, cities are increasing their local energy action planning capacity, meaning a holistic, city-wide perspective to energy management is becoming more common.
- An increase in the availability of data and visualisation tools means that calculating a city's total energy consumption is increasingly possible, though not systematically embedded into decision-making.

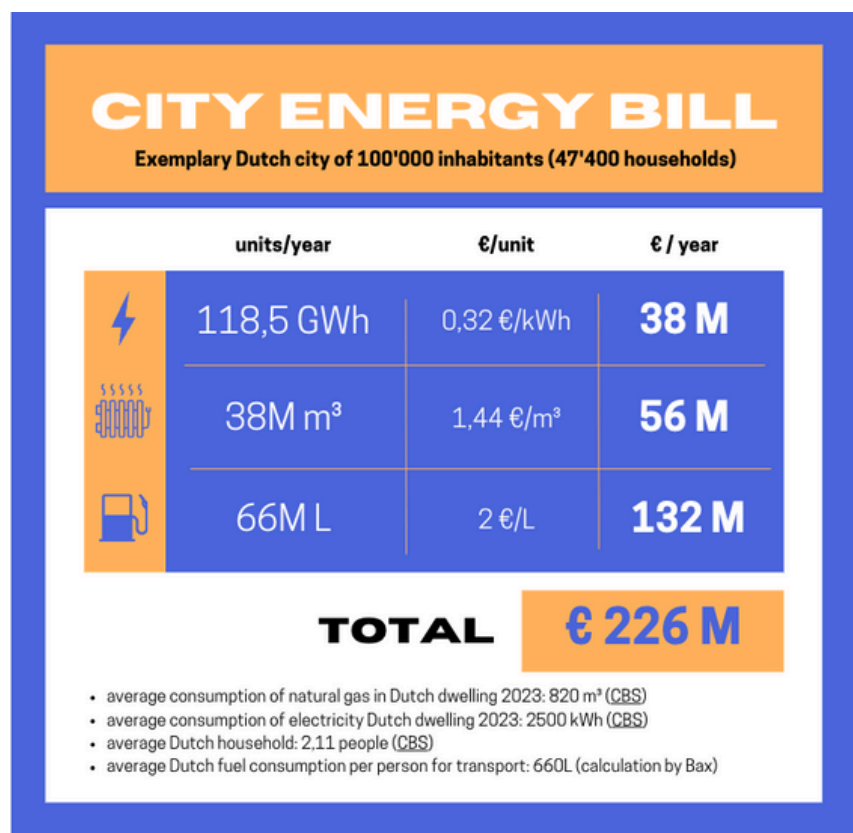


CASE STUDY

The City Energy Bill

This city energy bill estimates the total value of energy consumption for a typical city in the Netherlands with 100,000 inhabitants. The total annual bill is €225M+.

That would be **€5.65 billion** spent on energy until the Netherlands' goal of climate neutrality in 2050, within just one mid-sized city - without adjusting for inflation and assuming no change in energy cost.



But energy costs are highly likely to change through the energy transition, and the City Energy Bill helps to show the magnitude of such cost changes. The difference between an 5% increase and 5% decrease in this example city's energy bill would mean a difference of €565m in total energy spend by 2050.

By framing costs at the city level, the City Energy Bill enables municipalities to justify city-level investment ambitions, developing long-term investment portfolios for city-level affordability versus a project-oriented approach. By pursuing proactive market-making activities at city-level, like developing scalable, cost-saving renewable energy delivery vehicles and supporting local value-driven models like collective self-consumption, **cities could reduce tens of millions of euros annually from their city energy bill.**



NEXT : The City Energy Bill will influence investment in local energy economies

- Understanding the City Energy Bill will allow for energy use and spending predictions which can be integrated into **sustainable investment plans** for specific market segments and energy assets (e.g. charging points, energy-neutral apartment complexes), integrating knowledge of annual citizen spendings.
- Well-informed cities will use all available energy data to inform local energy action planning and **change the municipal focus from individual energy projects to high-level policy changes and investment portfolios.**

Now New Next – City Energy Bill

NEXT

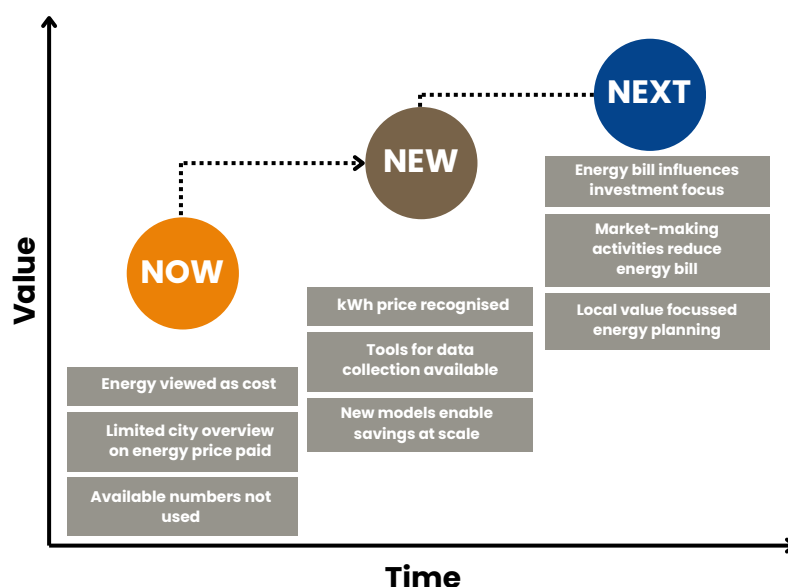
City Energy Bill embedded in investment decision-making

NEW

Recognition of kWh-price impact in policy

NOW

Energy transition not viewed as city-wide investment



About Now New Next

The *Now New Next* series is developed by the COPPER partnership, an initiative in which six cities and representatives from DSOs, academia and business are building Europe's first wave of Local Energy Action Plans.

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Learn more: interregnorthsea.eu/copper
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