

On-Bill Financing:

A versatile approach for implementing renewable energy and energy efficiency measures

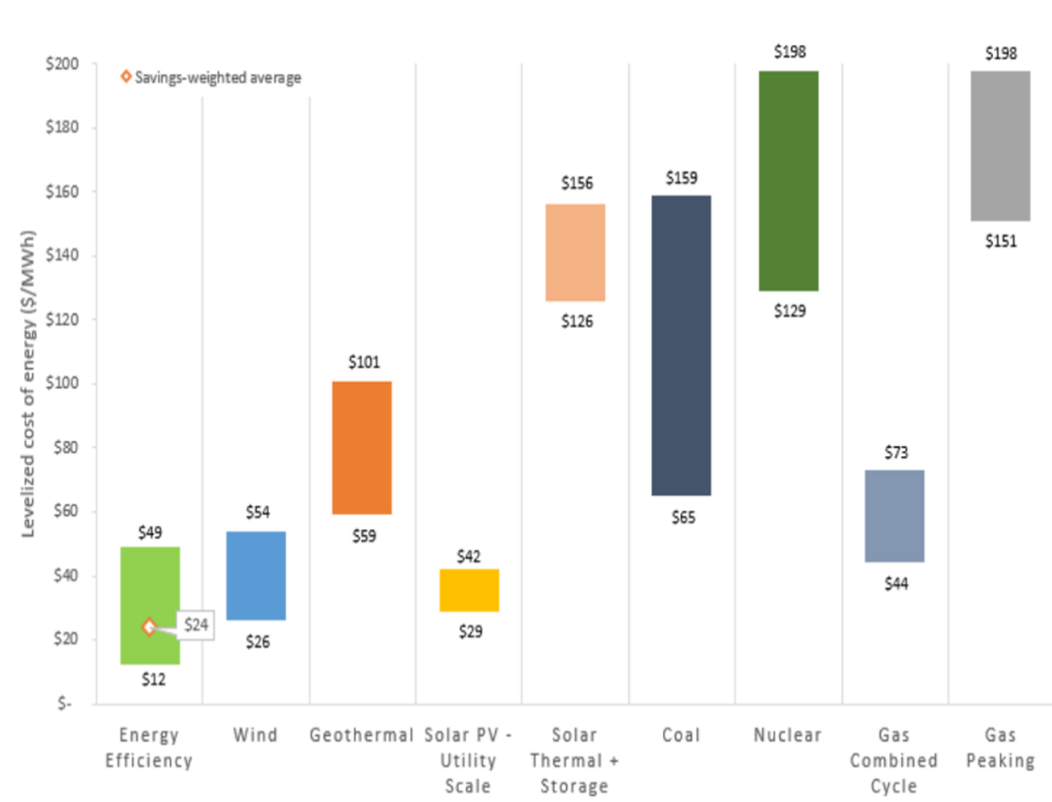
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Energy Efficiency: Highlights

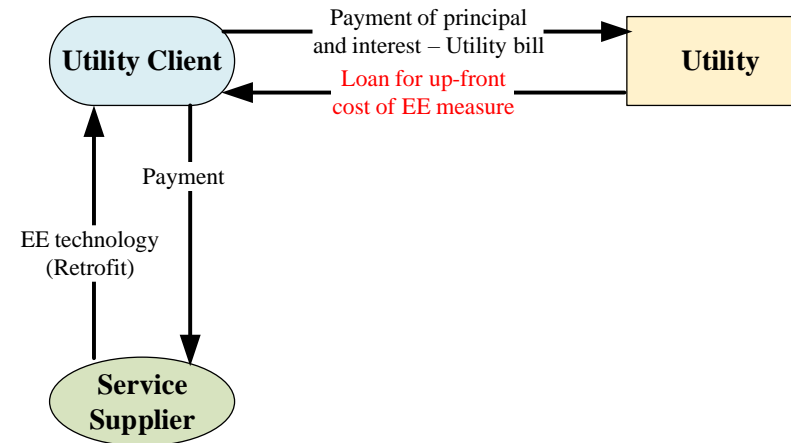
- Activity that seeks to reduce energy consumption by using less energy to achieve the same level of useful output
- Energy Efficiency means:
 - using less energy and is usually a behavioral change
 - using energy more efficiently and is often a technological change
- The average cost of a kWh saved could be **up to 4 times** less than that of a kWh produced with some existing supply options
- Energy efficiency is considered as the “**first fuel**” for the EU, as it is competitive, cost effective to achieve and widely available



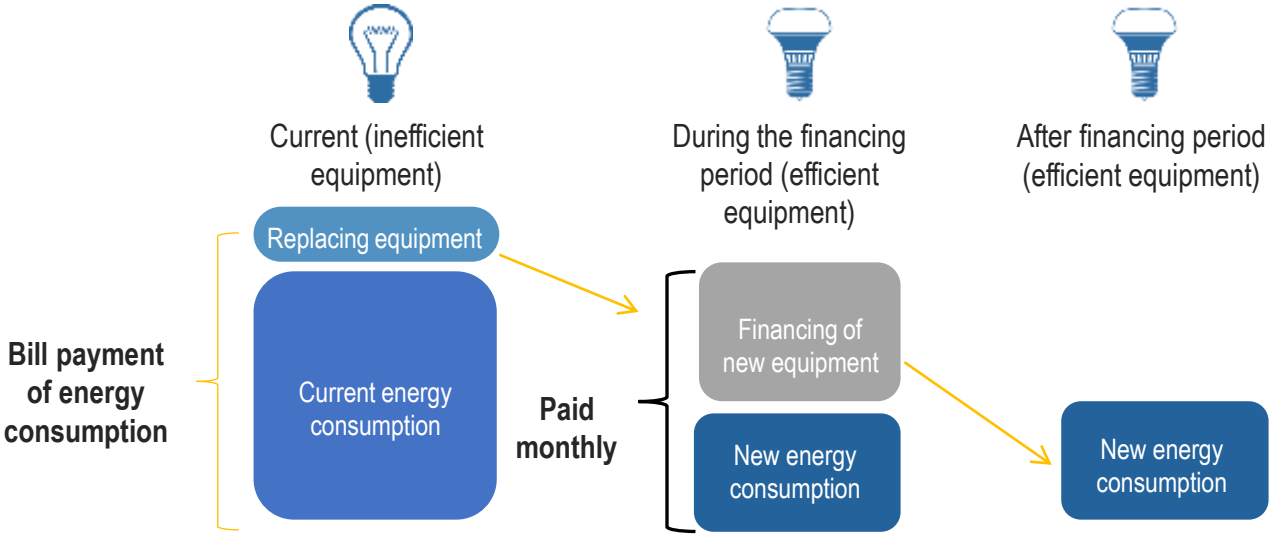
Source data: [ACEEE Utility Scorecard 2020](#), [Lazard 2020](#).

On-bill financing: Key features

- Utility takes on the role of a financing entity — in addition to selling electricity
- Clients repay the investment (principal and interest) over time via their monthly utility bills
- Targets mostly owners of free-standing residential homes and SMEs who want to acquire and install energy efficient technology.
- Programs require achieving bill neutrality for their participants — i.e., the energy cost savings equal or exceed debt service, resulting in a lower total bill (debt repayment and electricity) after retrofit.



On-bill financing: an illustration of bill neutrality



On-bill financing: advantages and disadvantages

Advantages

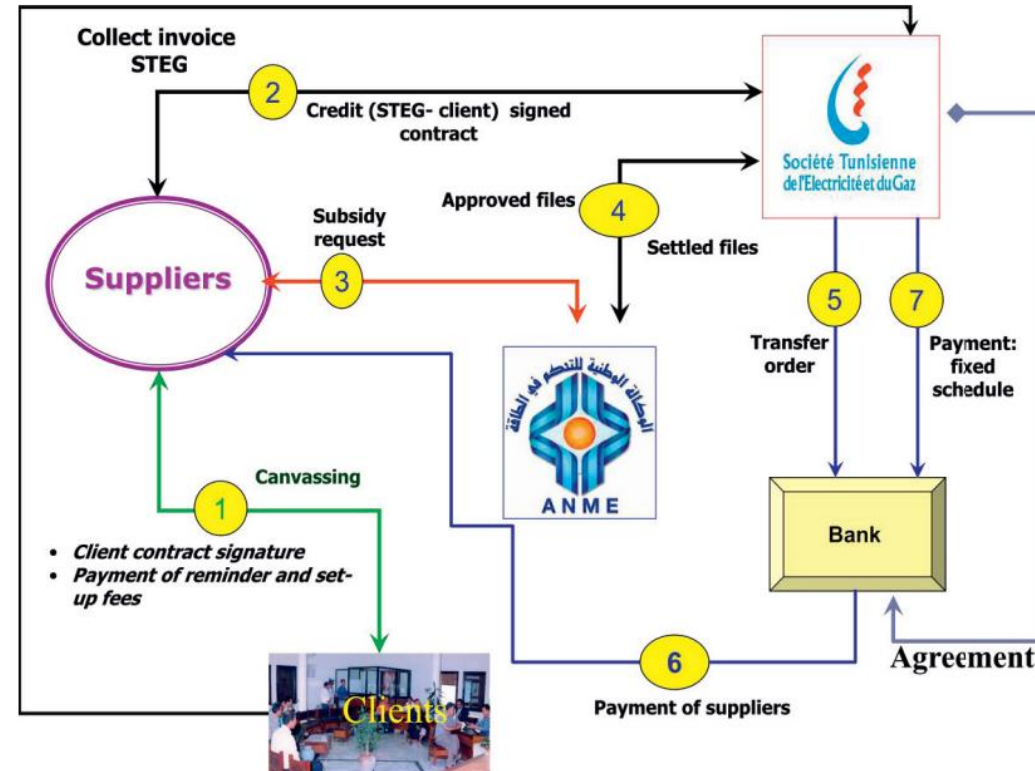
- Addresses “first-cost” hurdle to customer adoption by requiring little capital up front
- Can be structured to use third-party capital at no cost to taxpayers or ratepayers
- Provides a secure revenue stream because failure to pay can be tied to disconnection
- Can use past bill repayment as a proxy for credit
- Expands access to retrofits and lowers cost of capital because threat of utility shut-off leads customers to prioritize utility payments
- Leverages existing utility resources and customer practices to collect payments

Challenges

- Utilities could be reluctant to take on role of financing entity; potential exposure to consumer lending laws
- May require up-front investment by utility to reform billing structures and other systems
- In certain instances, ensuring that energy savings will exceed loan/tariff payments could be difficult

Tunisia's domestic solar water heating finance program — a success story

- **Goals:** (i) Develop sustainable SWH market and displace LPG use; (ii) Overcome market barriers and increase investment flows to renewable energy and energy efficiency technologies; (iii) improve energy security and reduce CO2
- **Barrier addressed:** Lack of affordable credit to end users
- **Instruments used:** Government grants and credit by local banks
- **Results (2005 – 2010)**
 - more than 3500 direct jobs created ~136,000 installations (363,000 sqm), equivalent to 705,600 tonnes of CO2, worth \$ 7 million at carbon market prices (NB: Program cost: \$ 2.5 million)



Source: http://climatepolicyinitiative.org/wp-content/uploads/2011/12/Touhami-and-Hannane_PROSOL.pdf

Source: https://www.researchgate.net/publication/270954562_The_Tunisian_Solar_Thermal_Market_A_Change_of_Scale

Thank you

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