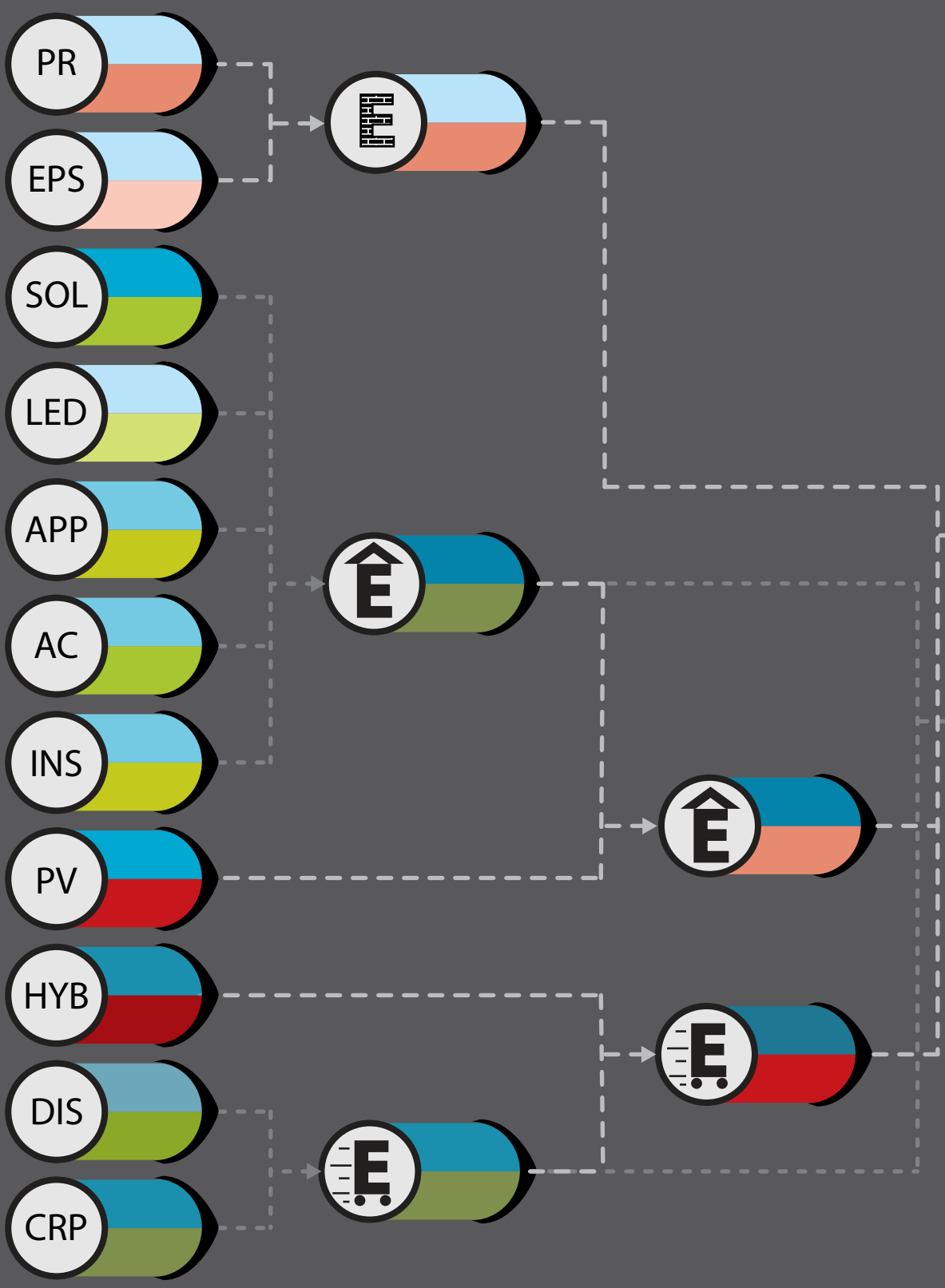
Reducing the total energy use of a residential building in Lebanon:

Is it cost-effective?*



All measures

Energy: **-43.4%**

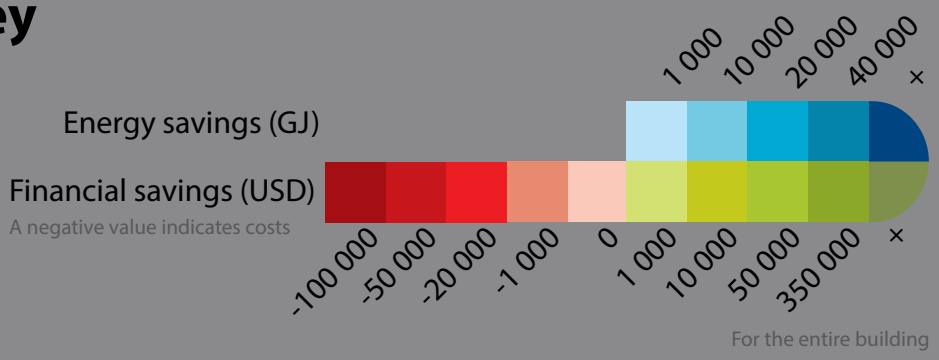
Cost: **103 000 USD**

Cost-effective measures only

Energy: **-35.6%**

Savings: **453 000 USD**

Key



PR	Prefabricated reinforced concrete ribs in the slabs
EPS	Expanded polystyren blocks in the slabs
SOL	Solar thermal panels (5 m^2) for hot water#
LED	Light emitting diodes for lighting#
APP	Highly efficient TV, fridge and washing machine#
AC	Highly efficient air conditionning unit#
INS	Expanded polystyrene insulation (5 cm) in the outer walls and roof
PV	Photovoltaic panels (3kWp) with batteries#
HYB	Two hybrid cars instead of two petrol cars#
DIS	Reduce annual car travel distance by 15%#
CRP	Car pooling for the main income earner, ownage and maintenance of one car instead of two#

#For each household

Combination of measures targeting embodied energy

Combination of measures targeting operational energy

Combination of measures targeting user-transport energy

*Compared to a new 4-storey residential building comprising 8 apartments of 153 m^2 each, over 50 years.

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Based on: Stephan, A., & Stephan, L. (2016). Life cycle energy and cost analysis of embodied, operational and user-transport energy reduction measures for residential buildings. *Applied Energy*, 161, 445-464. doi:http://dx.doi.org/10.1016/j.apenergy.2015.10.023