

# The potential of inexpensive solar thermal devices in decarbonizing Latin American countries' economies

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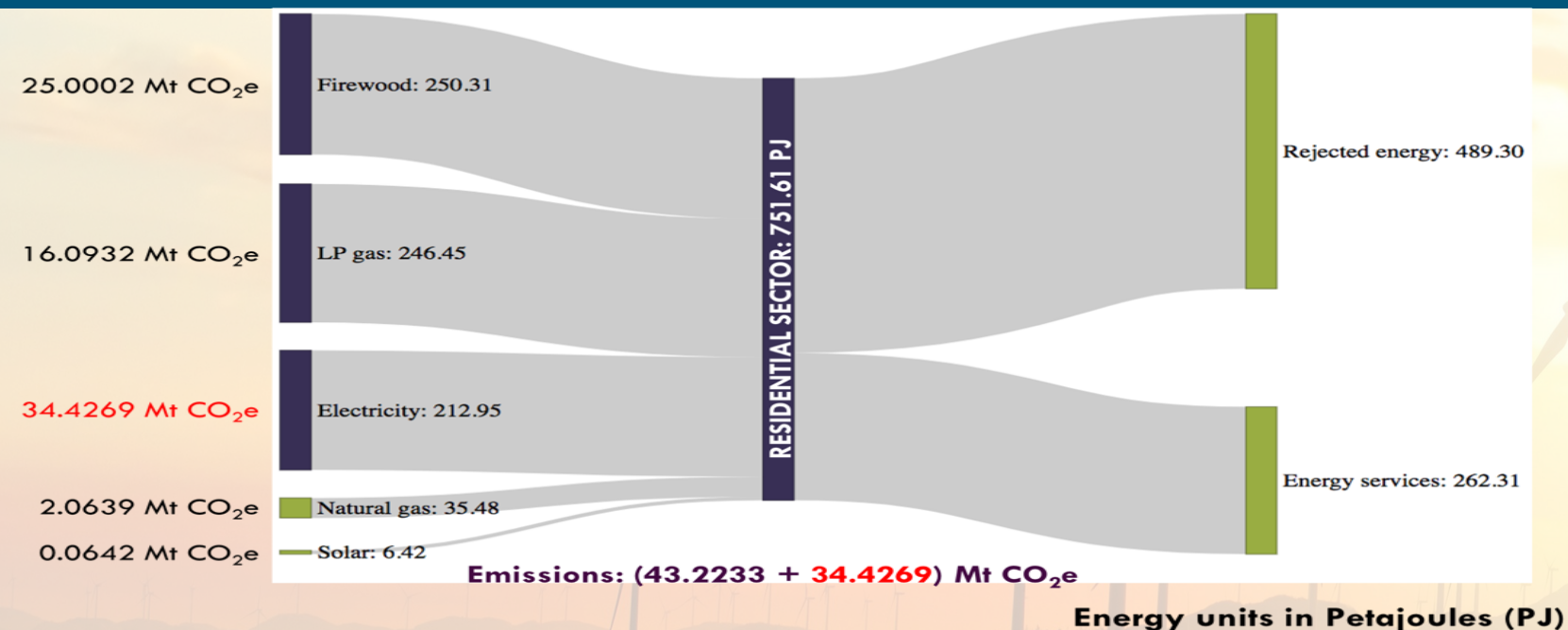
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## THE FACTS

All domestic heat applications and most of the heat for processes in micro and small industries in Mexico and many LatAm countries can be covered with inexpensive devices that use solar energy such as water heaters, and solar cookers. The use of these devices has a very significant potential to reduce the consumption of gas and firewood, improving the quality of the air inside dwellings and giving economic savings.

## ENERGY CONSUMPTION IN THE MEXICAN RESIDENTIAL SECTOR



## RESULTS

- A realistic penetration of solar water heaters and solar cookers of barely 50% in just the Mexican residential sector -attainable in the short term- would avoid about annually 8 million tons of carbon dioxide equivalent.
- An ideal total substitution of all gas and firewood boilers and stoves would increase this figure to 43.16 MtCO<sub>2e</sub>.
- Supplying all low and medium temperature heat for industrial processes with solar thermal energy, the avoided emission of toxic and GHG would reach 44.07 MtCO<sub>2e</sub>, a similar quantity to the one corresponding to the residential sector in Mexico.

## CONCLUSION

With inexpensive solar thermal devices, direct GHG emissions from the industrial, residential and commercial sectors could be significantly reduced, with many additional benefits for health, the economy, and the countries energy sovereignty. It is important to highlight that the indirect emissions produced by the generation of electrical energy consumed in these sectors can only be reduced by lowering the emissions factors of the national electrical system by increasing the participation of renewable sources in a said power generation.