# Article information:

Impact of plug-in hybrid electric vehicle charging on a distribution network in a Smart Grid environment | IEEE Conference Publication | IEEE Xplore
<https://ieeexplore.ieee.org/abstract/document/6175632/authors>

# Article summary:

1. The Department of Energy's “Grid 2030” strategic vision outlines the action plan to alleviate concerns through the development of a “Smart Grid” (SG).

2. Plug-in hybrid electric vehicles (PHEVs) provide an opportunity for residential consumers to participate in demand response programs.

3. Impact of PHEV charging on a small residential distribution network is analyzed, including economic implications and impact on demand factor, load factor and utilization factor.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article provides a comprehensive overview of the impact of plug-in hybrid electric vehicle (PHEV) charging on a distribution network in a Smart Grid environment. The article is well written and provides detailed information about the Department of Energy's “Grid 2030” strategic vision, as well as the potential benefits and drawbacks associated with PHEVs. The authors also provide an analysis of the impact of PHEV charging on a small residential distribution network, including economic implications and impacts on demand factor, load factor and utilization factor.

The article appears to be reliable and trustworthy overall, as it provides detailed information about the topic at hand and cites relevant sources throughout. However, there are some potential biases that should be noted. For example, while the authors do mention some potential drawbacks associated with PHEVs such as increased transformer losses and thermal loading on transformers, they do not explore any possible risks or negative impacts that could arise from large scale adoption of PHEVs. Additionally, while the authors discuss different pricing schemes such as TOU rates and RTP rates that could potentially be offered to individual residential consumers, they do not explore any other possible incentives or DR programs that could be offered to encourage PHEV adoption.

In conclusion, this article provides a comprehensive overview of the impact of plug-in hybrid electric vehicle charging on a distribution network in a Smart Grid environment. While it appears to be reliable overall, there are some potential biases that should be noted such as lack of exploration into possible risks or negative impacts associated with large scale adoption of PHEVs as well as lack of exploration into other possible incentives or DR programs that could be offered to encourage PHEV adoption.

# Topics for further research:

* PHEV charging risks
* PHEV charging incentives
* PHEV charging demand response programs
* PHEV charging transformer losses
* PHEV charging thermal loading
* PHEV charging economic implications

# Report location:

<https://www.fullpicture.app/item/70ae8b5b785c070324a0c059317fc437>