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The damage to the electricity system and to the environment by misleading electric vehicle penetration**Nuno Alexandre Soares Domingues**

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Studies on electric mobility are mainly on the focus on consumption in situ and assuming environmentally friend electricity. The present paper takes a closer look on the primary energy mix on the electricity production, using different periods of the day. Studies on electric mobility assume consumer reaction to price is rigid and consumers respond by the same mimics. The present paper uses assumptions based on real life effects and adequate consumer behaviors. The results obtained and the related considerations conflicts with main stream studies on the area. Studies on electric mobility assume electricity production dispatch is similar no matter volume of energy transactions. The present study changes the study from power to energy, bringing a closer approach to the marginal cost of production and the dispatch solution. It was possible to conclude that electricity mobility in Portugal is environmentally harmful, economical expensive and energetically unstable. The studies are made based on the present legislation, implemented status quo and foresee goals.

Biography

Nuno A S Domingues has received the Undergraduate Degree in Electrical Engineering from ISEL (2005), Master Degrees in Electrical Engineering and Computer Science from IST (2008) and PhD in Electrical Engineering and Computer Science from FCT-UNL with his thesis on energy, sustainability and efficiency. He is a Professor in ISEL. His topics of research include electricity markets modeling and simulation, energy systems, sustainability, efficiency, clean technologies, mobility and transport, sustainable consumption, e-learning and regulation.

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