

Business models towards the effective integration of electric vehicles in the grid

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Abstract-

To achieve an effective integration of the electric vehicle in the grid, not only technical issues must be solved, but also a new regulatory context and business models must be proposed. This paper proposes two electric vehicle integration business models; one resembles the mobile-phone business, while the other is more based on current practices in the electricity-supply business. Decomposition into three layers: physical, management, and business, is used to describe those business models. Furthermore, electric vehicle charging scenarios are presented to illustrate how the proposed business models fit in each of the potential situations. Finally, several practical study cases are presented.

Index Terms- Business models, charging-point manager, effective EV integration, electric vehicles, energy service providers, regulation, V2G.

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