Due to the increasing penetration of distributed generation and new high-power consumption loads – such as electric vehicles (EVs) – distribution system operators (DSO) are facing new grid security challenges. DSOs have historically dealt with such issues by making investments in grid reinforcement. However, an alternative solution, enabled by the expected roll-out of smart meters and high penetration of flexible loads, would be the increased use of flexibility services. Flexible loads, with EVs at their forefront, can modulate their consumption or even inject power back to the grid depending on current grid conditions. In return, flexibility provision should be remunerated accordingly. In this paper, the authors are interested in making an accurate description of the flexibility services at the distribution level which could be provided by EVs as well as their requirements, e.g. location, activation time and duration. Market design recommendations for enhancing the provision of DSO grid services by EVs are derived from the conducted analysis.