**1 Description of the Use Case**

**1.1 Name of Use Case**

|  |  |  |
| --- | --- | --- |
| ***Use Case Identification*** | | |
| ***ID*** | ***Domain(s)/ Zone(s)*** | ***Name of Use Case*** |
| OpenNES\_UC\_EVU\_CNTRENERGYFLOW |  | Utility controls energy flow between DER and transmission and/or distribution grid |

**1.2 Version Management**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Version Management*** | | | | |
| ***Version No.*** | ***Date*** | ***Name of Author(s)*** | ***Changes*** | ***Approval Status*** |
| 1.0 | 11.11.2014 | Christian Kasberger |  |  |
|  |  |  |  |  |

**1.3 Scope and Objectives of Use Case**

|  |  |
| --- | --- |
| ***Scope and Objectives of Use Case*** | |
| ***Scope*** | Remote control amount of energy production of any DER via a network interface that supports uni-, multi- and broadcast requests for electrical active and reactive power adjustment |
| ***Objective(s)*** | Implementing an interface, which enables remote controllable mechanism for adjusting energy flow between DER and transmission and/or distribution grid to achieve minimum energy exchange between the systems. |
| ***Related business case(s)*** | Reduce or rather delay necessary network expansion costs where such mechanisms can help to minimize energy network load. |

**1.4 Narrative of Use Case**

|  |
| --- |
| ***Narrative of Use Case*** |
| ***Short description*** |
| TSO (transmission system operator) and/or DSO (distribution system operator) which are substituted with EGO (energy grid operator) shall have the possibility to enable and disable energy distribution from any DER to the distribution system and hence to the transmission system as well. |
| ***Complete description*** |
| Due to physically conditions of the EG (electrical grid) the EGO can adjust the amount of energy a DER can distribute to other electrical consumers across the DER’s PCC (point of common coupling).  Therefor EGO remote control setpoints of energy or rather power production of interconnected DERs. |

**1.5 General Remarks**

|  |
| --- |
| ***General Remarks*** |
|  |

**2 Diagrams of Use Case**

|  |
| --- |
| ***Diagram(s) of Use Case*** |
|  |

**3 Technical Details**

**3.1 Actors**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Actors*** | | | |
| ***Grouping*** *(e.g. domains, zones)* | | ***Group Description*** | |
|  | |  | |
| ***Actor Name***  *see Actor List* | ***Actor Type***  *see Actor List* | ***Actor Description***  *see Actor List* | ***Further information specific to this Use Case*** |
| EGO |  |  |  |
| DER |  |  |  |

**3.2 Triggering Event, Preconditions, Assumptions**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Use Case Conditions*** | | | |
| ***Actor/System/Information/Contract*** | ***Triggering Event*** | ***Pre-conditions*** | ***Assumption*** |
|  |  |  |  |
|  |  |  |  |

**3.3 References**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***References*** | | | | | | |
| ***No.*** | ***References Type*** | ***Reference*** | ***Status*** | ***Impact on Use Case*** | ***Originator / Organisation*** | ***Link*** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**3.4 Further Information to the Use Case for Classification / Mapping**

|  |
| --- |
| ***Classification Information*** |
| ***Relation to Other Use Cases*** |
|  |
| ***Level of Depth*** |
|  |
| ***Prioritisation*** |
|  |
| ***Generic, Regional or National Relation*** |
|  |
| ***Viewpoint*** |
|  |
| ***Further Keywords for Classification*** |
|  |

**4 Step by Step Analysis of Use Case**

**4.1 Steps – Scenario Name**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Scenario Conditions** | | | | | |
| **No.** | **Scenario Name** | **Primary Actor** | **Triggering Event** | **Pre-Condition** | **Post-Condition** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**4.2 Steps – Scenarios**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Scenario*** | | | | | | | | |
| ***Scenario Name :*** | | ***No. 1 - …*** | | | | | | |
| ***Step No.*** | ***Event*** | ***Name of Process/ Activity*** | ***Description of Process/ Activity*** | ***Service*** | ***Information Producer (Actor)*** | ***Information Receiver (Actor)*** | ***Information*** | ***Requirements , R-ID*** |
| ***Exchanged*** |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

**5 Information Exchanged**

|  |  |  |
| --- | --- | --- |
| ***Information Exchanged*** | | |
| ***Name of Information (ID)*** | ***Description of Information Exchanged*** | ***Requirements to information data*** |
|  |  |  |
|  |  |  |

**6 Requirements (optional)**

|  |  |
| --- | --- |
| **Requirements (optional)** | |
| **Categories for Requirements** | **Category Description** |
|  |  |
| **Requirement ID** | **Requirement Description** |
|  |  |
|  |  |

**7 Common Terms and Definitions**

|  |  |
| --- | --- |
| **Common Terms and Definitions** | |
| **Term** | **Definition** |
|  |  |

**8 Custom Information (optional)**

|  |  |  |
| --- | --- | --- |
| ***Custom Information (optional)*** | | |
| ***Key*** | ***Value*** | ***Refers to Section*** |
|  |  |  |
|  |  |  |