implementation of the ability to measure and rate the system performance against the desired performance factors. The disclosure above relates to the Architecture development aspect of step 3.

**[00152]** Figures 19A-B illustrate an example of a blueprint progress flow graphic. Specifically, Figures 19A-B illustrate a process flow of the steps that may be undertaken to define the smart grid requirements and the steps that may be executed to implement the smart grid. The smart grid development process may begin with a smart grid vision development, which may outline the overall goals of the project, that may lead to the smart grid roadmapping process. The roadmapping process may lead to blueprinting and to value modeling.

**[00153]** Blueprinting may provide a methodical approach to the definition of the smart grid in the context of the entire utility enterprise. Blueprinting may include an overall roadmap, which may lead to a baseline and systems evaluation (BASE) and to a requirements definition and analytics selection (RDAS). The RDAS process may create the detailed definition of the utility's specific smart grid.

**[00154]** The BASE process may establish the starting point for the utility, in terms of systems, networks, devices, and applications to support smart grid capabilities. The first part of the process is to develop a systems inventory of the grid, which may include: grid structure (such as generation, transmission lines, transmission substations, sub transmission lines, distribution substations, distribution feeders, voltage classes); grid devices (such as switches, reclosers, capacitors, regulators, voltage drop compensators, feeder inter-ties); substation automation (such as IEDs, substation LANs, instrumentation, station RTUs/computers); distribution automation (such as capacitor and switch control; fault isolation and load rollover controls; LTC coordination systems; DMS; Demand Response Management System); and grid sensors (such as sensor types, amounts, uses, and counts on distribution grids, on transmission lines and in substations); etc. Once the inventory is complete, an evaluation of the utility against a high level smart grid readiness model may be created. An as-is dataflow model and a systems diagram may also be created.

[00155] The architecture configuration (ARC) process may develop a preliminary smart grid technical architecture for the utility by combining the information from the

sending to a central data storage associated with the central power grid authority the memory location of the data storage device.

10. The method of claim 9, wherein the device within the power grid comprises a substation.

11. The method of claim 10, wherein the data storage associated with the substation comprises a memory that is located in or on the substation.

12. The method of claim 10, wherein the substation sends the link to the central power grid authority; and wherein the central power grid authority stores the link in the central data storage.

13. The method of claim 12, wherein the central power grid authority accesses the link in the central data storage; wherein the central power grid authority sends a request to the substation requesting data associated with the link; and wherein the central power grid authority receives a response from the substation comprising the data associated with the link.

~~15~~14. A power grid management system for managing a power grid, the power grid comprising a plurality of grid devices, the power grid management system comprising:

a central power grid authority for managing the power grid;

a first grid device positioned in a first section of the power grid, the first device comprising:

a first sensor for sensing an electrical parameter in the first section of the power grid;

a first processor for analyzing the sensed electrical parameter in the first section of the power grid and determining an event based on the sensed electrical parameter, and

a second grid device comprising a substation positioned in a second section of the power grid, the second device comprising:

a second processor for receiving the event determined by the first grid device, for modifying at least a section of the power grid comprising the second section based on the event, and for transmitting to the central power grid authority information indicative of the modification of the at least a section of the power grid.

~~16~~15. The power grid management system of claim ~~15~~14, wherein the second grid device modifies the section of the power grid without intervention of the central power grid authority.

~~17~~16. The power grid management system of claim ~~15~~14, wherein at least one feeder circuit emanates from the substation; and

wherein the first sensor of the first grid device senses the electrical parameter for at least a part of the feeder circuit.

~~18~~17. The power grid management system of claim ~~17~~16, wherein the second grid device further comprises a second sensor for sensing an electrical parameter in the second section of the power grid; and

wherein the second processor analyzes the event determined by the first grid device and the sensed electrical parameter in the second section of the power grid in order to modify the at least a section of the power grid.

~~19~~18. The power grid management system of claim ~~18~~17, wherein the substation further comprises data storage associated with and proximate to the substation, the data storage comprising a plurality of memory locations for storing the sensed electrical parameter in the second section of the power grid.

~~20~~19. A substation in a first section of a power grid, the substation comprising:

a communication interface configured to communicate with a grid device positioned in a second section of the power grid, the grid device configured to sense an electrical parameter in the second section of the power grid, analyze the sensed electrical parameter in the second section of the power grid, and determine an event

based on the sensed electrical parameter, the communication interface configured to receive the event; and

a processor in communication with the communication interface configured to:

receive the event determined by the grid device,

modify the first section of the power grid based on the received event, and

transmit to a central power grid authority information indicative of the modification of the first section of the power grid.

~~21~~20. The substation of claim ~~20~~19, wherein the substation is configured to modify the first section of the power grid without intervention of the central power grid authority.

~~22~~21. The substation of claim ~~20~~19, wherein a feeder circuit emanates from the substation; and

wherein the communication interface is configured to receive from the grid device the sensed electrical parameter for at least a part of the feeder circuit.

~~23~~22. The substation of claim ~~22~~21, further comprising a sensor configured to sense an electrical parameter in the first section of the power grid; and

wherein the processor is configured to analyze the event determined by the grid device and the sensed electrical parameter from the sensor in order to modify the first section of the power grid.

~~24~~23. The substation of claim ~~23~~22, wherein the substation further comprises data storage associated with and proximate to the substation, the data storage comprising a plurality of memory locations configured to store the sensed electrical parameter from the sensor.