NEO LEAF ADDED FEATURES:

Changes in /WiFiConfig:

- More interactive
- We can stay on the page while ESP8266 tries to connect to the WIFI network
- Indicator of Physical device being online on the network
- Once a successful connection is made, “CONNECT” button changes to “CONNECTED” and the “NEXT” button turns green (become active).
- The form is also update with blank strings and the placeholder value of SSID is the SSID of the current network to which the ESP is connected.
- All the above changes in the “WiFiConfig” page allows us to see whether the device is actually connected to the network or whether it has failed. If the connection is failed, we can try other WIFI network without restarting the ESP multiple times.

Added “/networkSelect”:

- This is a new page added in the Neo Leaf’s web interface
- This page allows you to create a network of neo-Leaf devices with some name and network parameters like Appliance Input Voltage, Utility Company, Rate Plan, Peak Demand, and User Target.
- This page also servers the purpose of selecting an existing network for the current device
- The parameters of exiting networks when selected from the drop-down list are dynamically update on the web page.
- One can choose to edit the network parameters from this page.
- One the user selects or creates a network he/she is prompted with a message which ask whether the user want to use same parameters for the device or want to set some specific parameters for the device.
- The user can choose the network parameters for device of can set different parameters.

Changes in “/LeafConfig”:

- When the network is selected the “/networkSelect” make a get request to “/LeafConfig”
- This page has also been exited to incorporate some changes.
- The very first visible change is grouping the device specific parameters and common network parameters.
- The common network parameters of the device are auto filled with network parameters if the user had selected to use the network parameters for the device. If not, then those parameter fields are kept blank.

Added “/device”:

- This webpage dynamically updates all the connected device belonging to the same network.
- The inter-device communication has been established and now the devices can send or get information using the “POST” method at “/comm” endpoint.

Change on the firmware end of ESP8266:

- Added the feature of automatically redirecting to the IP address obtained on the WIFI network.
- Added support for auto fill of “WiFiConfig” page
- Added support for updating the device connectivity status on the “WiFi Config” page.
- Added support for network setup, network search, and device search.
- Only those devices are detected which are on the same network.
- The network parameters are stored in non-volatile memory and updated whenever network edit is done from the web interface.
- All the devices which are online and belong to same network, the parameters of such devices are stored on the non-volatile memory of ESP8266.
- Functions for identifying, filtering the devices from different networks.

METHOD	ENDPOINT	DESCIPTION	PARAMS
GET	/WiFiConfig	To configure the WiFi parameters	NILL
POST	/WiFiConfig	To receive the WiFI parameters	SSID and PASSWORD
GET	/networkSelect	To select neo leaf network or to create a new one.	NILL
GET	/LeafConfig	Provides an interface to configure the device parameters	NILL
POST	/LeafConfig	To receiver the NEO LEAF Paramters	Opp. Voltage, plan rate, user limit, etc…
GET	/reset	To reset the neo Leaf device, deleted all the previous configurations and Reboot the device	NILL
GET	/isConnected	Provides information about the device connectivity status and IP address.	NILL
GET	/selectedNetwork	Provides the params to the “networkSelect” webpage to auto fill the param values in form	NILL
GET	/getNetwork	Provides the list of all available network on the same wifi network	NILL
POST	/getNetwork	Receives the selected or created network params.	Network name, operating voltage, utility company, plan rate, plan limit, user limit
GET	/getParams	Provides the device paramters	NILL
GET	/devices	Shows the devices connected to same wifi and same neo leaf network	NILL
GET	/readDevices	Provides list of devices on the network for the “/devices” webpage	NILL
POST	/comm	All the inter devices communications are handled here. The device parameters, other device parameters, requesting a state change, notifying	command=notify&deviceName=OVE_C1DF02&state=1&powerConsumption=100&netPowerConsumption=200

		the power consumption all are implemented here	command=basicInfo command=check_parameters&deviceName=OVE_C1DF02