The ScheduleDetail XML contains 2 categories of Fuel Types: EnergyFuelTypes and StartupFuelTypes. These 2 categories of fuel types contain 2 sub components – Primary fuel and a Sub fuel. The Primary and Sub fuels must be set to valid eMKT recognized fuel types. A participant may reference the table below, which has been previously provided, for the acceptable values to set these primary and sub fuel types. The primary fuel type corresponds to the table headings, and the sub fuel types correspond to the values in the columns.

The problem with using a static table is that it may be subject to change, and one would have to rely on knowing if/when the table has changed. PJM has provided a means to obtain the table programmatically via XML which will always contain the latest supported fuel types as described further below. Participants may then alter their applications to utilize the data set returned from the QueryFuelTypes XML submittal in order to submit valid fuel types within their ScheduleDetail XML.

The table of valid fuel types is:

<table>
<thead>
<tr>
<th>Coal</th>
<th>Gas</th>
<th>Petroleum</th>
<th>Nuclear</th>
<th>Hydro</th>
<th>Other</th>
<th>Co-Fire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-Anthracite Anthracite</td>
<td>Natural Gas</td>
<td>Distillate #1</td>
<td>Enriched U Other</td>
<td>Run of River</td>
<td>Bagasse</td>
<td>Nat Gas#6 Oil 0.5 S</td>
</tr>
<tr>
<td>Semi-Anthracite</td>
<td>Propane</td>
<td>#2 Oil</td>
<td>Other</td>
<td>Pumped</td>
<td>Battery</td>
<td>Nat Gas#6 Oil 1.0 S</td>
</tr>
<tr>
<td>Bituminous 0.5 S</td>
<td>Landfill Gas</td>
<td>Diesel Grade 1-D</td>
<td></td>
<td>Storage</td>
<td>Compressed Air</td>
<td>Nat Gas#6 Oil 2.0 S</td>
</tr>
<tr>
<td>Bituminous 1.0 S</td>
<td>Butane</td>
<td>Diesel Grade 2-D</td>
<td></td>
<td></td>
<td>Fuel Cell Nat</td>
<td>Nat Gas#2 Oil</td>
</tr>
<tr>
<td>Bituminous 1.5 S</td>
<td>Hydrogen</td>
<td>Diesel Grade 4-D</td>
<td></td>
<td></td>
<td>Gas#Hy</td>
<td>Nat Gas#Coal 0.5 S</td>
</tr>
<tr>
<td>Bituminous 2.0 S</td>
<td>Gasified Coal</td>
<td>Diesel Grade S-M</td>
<td>#4 Oil Light</td>
<td></td>
<td>Fuel Cell Nat Gas</td>
<td>Nat Gas#Coal 1.0 S</td>
</tr>
<tr>
<td>Bituminous 2.5 S</td>
<td>Refinery Gas</td>
<td>#4 Oil Heavy</td>
<td>Other</td>
<td></td>
<td>Geothermal</td>
<td>Nat Gas#Coal 1.5 S</td>
</tr>
<tr>
<td>Bituminous 3.0 S</td>
<td>Other</td>
<td>#5 Oil Light</td>
<td></td>
<td></td>
<td>Municiple Waste</td>
<td>Nat Gas#Coal 2.0 S</td>
</tr>
<tr>
<td>Bituminous 4.0 S</td>
<td>Other</td>
<td>#6 Oil Heavy</td>
<td></td>
<td></td>
<td>Solar</td>
<td>Nat Gas#Coal 3.0 S</td>
</tr>
<tr>
<td>Bituminous 5.0 S</td>
<td>Other</td>
<td>#6 Oil 0.5 S</td>
<td></td>
<td></td>
<td>Tires</td>
<td>Nat Gas#Coal 4.0 S</td>
</tr>
<tr>
<td>Bituminous 6.0 S</td>
<td>Other</td>
<td>#6 Oil 1.0 S</td>
<td></td>
<td></td>
<td>Wind</td>
<td>Nat Gas#Coal 5.0 S</td>
</tr>
<tr>
<td>Sub Bituminous 0.5 S</td>
<td>Crude</td>
<td>#6 Oil 2.0 S</td>
<td></td>
<td></td>
<td>Wood</td>
<td>Nat Gas#Coal 6.0 S</td>
</tr>
<tr>
<td>Sub Bituminous 1.0 S</td>
<td>Other</td>
<td>Crude</td>
<td></td>
<td></td>
<td>Other</td>
<td>#2 Oil/Coal</td>
</tr>
<tr>
<td>Sub Bituminous 1.5 S</td>
<td>Other</td>
<td>Kero L Sulfur Jet 55</td>
<td></td>
<td></td>
<td>Other</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kerosene Jet 54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jet A / JP-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jet B / JP-4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Petroleum Coke</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The XML Query that can be used to obtain the latest fuel types is:

```xml
<?xml version="1.0"?>
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header/>
  <env:Body>
    <QueryRequest xmlns="http://emkt.pjm.com/emkt/xml">
      <QueryFuelTypes/>
    </QueryRequest>
  </env:Body>
</env:Envelope>
```

The XML response that is returned from issuing the QueryFuelTypes:
<Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/">
  <Body>
    <QueryResponse xmlns="http://emkt.pjm.com/emkt/xml">
      <FuelTypeSet>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/#6 Oil 0.5 S"/>
        <FuelType primaryType="Co-Fire" subType="Other"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/#6 Oil 2.0 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/#2 Oil"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 0.5 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 1.0 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 1.5 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 2.0 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 2.5 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 3.0 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 4.0 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 5.0 S"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/Coal 6.0 S"/>
        <FuelType primaryType="Co-Fire" subType="#2 Oil/Coal"/>
        <FuelType primaryType="Co-Fire" subType="Nat Gas/#6 Oil 1.0 S"/>
        <FuelType primaryType="Coal" subType="Meta-Anthracite"/>
        <FuelType primaryType="Coal" subType="Anthracite"/>
        <FuelType primaryType="Coal" subType="Semi-Anthracite"/>
        <FuelType primaryType="Coal" subType="Bituminous 0.5 S"/>
        <FuelType primaryType="Coal" subType="Bituminous 1.0 S"/>
        <FuelType primaryType="Coal" subType="Bituminous 1.5 S"/>
        <FuelType primaryType="Coal" subType="Bituminous 2.0 S"/>
        <FuelType primaryType="Coal" subType="Bituminous 2.5 S"/>
        <FuelType primaryType="Coal" subType="Bituminous 3.0 S"/>
        <FuelType primaryType="Coal" subType="Bituminous 4.0 S"/>
        <FuelType primaryType="Coal" subType="Bituminous 5.0 S"/>
        <FuelType primaryType="Coal" subType="Bituminous 6.0 S"/>
        <FuelType primaryType="Coal" subType="Sub Bituminous 0.5 S"/>
        <FuelType primaryType="Coal" subType="Sub Bituminous 1.0 S"/>
        <FuelType primaryType="Coal" subType="Sub Bituminous 1.5 S"/>
        <FuelType primaryType="Coal" subType="Lignite"/>
        <FuelType primaryType="Coal" subType="Liquified Coal"/>
        <FuelType primaryType="Coal" subType="Other"/>
        <FuelType primaryType="Gas" subType="Natural Gas"/>
        <FuelType primaryType="Gas" subType="Propane"/>
        <FuelType primaryType="Gas" subType="Landfill Gas"/>
        <FuelType primaryType="Gas" subType="Butane"/>
      </FuelTypeSet>
    </QueryResponse>
  </Body>
</Envelope>
<FuelType primaryType="Petroleum" subType="#4 Oil Light"/>
<FuelType primaryType="Petroleum" subType="Orimulsion"/>
</FuelTypeSet>
</QueryResponse>
</Body>
</Envelope>