

Proposed New Definitions <sup>1</sup>in Module A to be used in Module E<sup>2</sup>

**Planning Reserve Margin (“PRM”):** The<sup>3</sup> percentage of Capacity Resources that an LSE must maintain<sup>4</sup> **for planning purposes, above the difference in its Forecast LSE Requirement and Load Modifying Resources,**<sup>5</sup> to reliably be able to serve Load based upon a one occurrence in ten years probability analysis.<sup>6</sup>

**Resource Adequacy Requirements (“RAR”):** <sup>7</sup>The<sup>8</sup> planning reserve procedures<sup>9</sup> and requirements found in Module E of the Tariff and the Resource Adequacy<sup>10</sup> Business Practices Manual to ensure that there are adequate<sup>11</sup> **Planning<sup>12</sup> Resources** available to enable LSEs to reliably serve<sup>13</sup> **Load.**<sup>14</sup>

**Capacity Resources:** The Resources and External<sup>15</sup> Resources that are available to meet peak Load demand<sup>16</sup>, including Generation Resources and Demand Response Resources.<sup>17</sup>

**Loss of Load Expectation (“LOLE”):** The LOLE probability criteria shall be loss of load no greater than 0.1 day in one (1) year, which equals the sum of the loss of load probability for the integrated daily peak hour for each day of the year.<sup>18</sup>

**Forecast LSE Requirement:** <sup>19</sup>The expected Demand<sup>20</sup> for an LSE for a given time period based upon considerations including, but not limited to, anticipated weather conditions and expected Load changes.<sup>21</sup>

**Planning Year:** <sup>22</sup>The<sup>23</sup> period of time from June 1 of one year to May 31 of the following year that is used for developing Resource Plans.<sup>24</sup> **The first Planning Year will commence on June 1, 2009.**<sup>25</sup>

**Resource Plan:** The plan<sup>26</sup> made by an LSE to ensure that its Forecast LSE Requirement plus PRM will be met or be exceeded by the<sup>27</sup> **Planning<sup>28</sup> Resources** designated by the LSE.<sup>29</sup>

**Unforced Capacity:** The<sup>30</sup> amount of available capacity of a Capacity<sup>31</sup> **Resource<sup>32</sup>** after accounting for that resource's forced outage<sup>33</sup> **rate.**<sup>34</sup>

**Load Modifying Resource (“LMR”):** A Demand Resource or Behind-the Meter Generation.<sup>35</sup>

**Demand: The maximum integrated hourly sum of Load occurring over a specified period, such as a day, month, season, or annual in MW.**<sup>36</sup>

**Scheduling Instruction: Directives issued by the Transmission Provider to Market Participants with Load Modifying Resources indicating MW quantities to be reduced during Emergencies.**<sup>37</sup>

**Use-Limited Resource: Resources, including but not limited to, Generation Resources with limited use due to emission levels or DRRs with reduced capacity due to weather or duration use.**<sup>38</sup>

**Planning Resource: Resources that can be used to satisfy the RAR including Capacity Resources and Load Modifying Resources.**<sup>39</sup>

**Demand Resource: Interruptible Load or Direct Control Load Management.**<sup>40</sup>

**Behind the Meter Generation: Generating resources that are not in the Transmission Provider Energy Markets and have an obligation to be available under Emergencies.**<sup>41</sup>

**MODULE E – RESOURCE ADEQUACY November 21, 2007 DRAFT<sup>43</sup>**

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## **MODULE E - RESOURCE ADEQUACY**

### **I. INTRODUCTION**

This Module E provides mandatory requirements to be met by the Transmission Provider, **Market Participants serving Load in the Transmission Provider Region or serving Load on behalf of a**<sup>78</sup> Load Serving Entities<sup>79</sup> **Entity**<sup>80</sup> (“LSEs”) and other Market Participants (“MPs”)<sup>81</sup> to ensure access to deliverable, reliable and adequate Capacity<sup>82</sup> **Planning**<sup>83</sup> Resources to meet load requirements on the Transmission Provider<sup>84</sup> System. The requirements established in this Module E recognize and are complimentary with the reliability mechanisms of the states and the Regional Reliability Organizations (“RRO”) within the Transmission Provider Region. Planning Reserve Margin (“PRM”) levels will be determined by analytical study methods in the Module E process. If higher or lower PRMs are mandated by **certain**<sup>85</sup> states, then the Transmission Provider will<sup>86</sup> **shall**<sup>87</sup> recognize and incorporate such PRMs for any affected LSEs. Nothing in **this**<sup>88</sup> Module E affects existing state jurisdiction over the construction of additional capacity or the authority of states to set and enforce compliance with standards for adequacy. The Resource Adequacy Requirements (“RAR”) in **this**<sup>89</sup> Module E are ~~also~~<sup>90</sup> not intended to **in**<sup>91</sup> any way affect state actions over entities under their<sup>92</sup> **the states**<sup>93</sup> jurisdiction.

### **II. RESOURCE ADEQUACY REQUIREMENTS**

#### **68 Determination of PRM<sup>94</sup> Planning Resource Obligations<sup>95</sup>**

~~The~~<sup>96</sup> **Commencing five (5) Months before the Planning Year, the**<sup>97</sup> Transmission Provider shall perform analysis on an annual basis to establish ~~one or more~~<sup>98</sup> **the**<sup>99</sup> PRMs for LSEs<sup>100</sup> **each LSE**<sup>101</sup> in the Transmission Provider Region. The analysis shall be consistent with ~~good utility practices~~<sup>102</sup> **Good Utility Practices**<sup>103</sup> and the reliability requirements of the RROs and applicable states in the Transmission Provider Region. The PRM analysis shall consider factors including, but not limited to: the ~~forced outage~~<sup>104</sup> **Generator Forced Outage**<sup>105</sup> rates of Capacity Resources, Generator Planned Outages, expected performance of ~~Alternative Capacity~~<sup>106</sup> **Load Modifying**<sup>107</sup> Resources, Load ~~forecast~~<sup>108</sup> **Forecast**<sup>109</sup> uncertainty, **system operating reserve requirements,**<sup>110</sup> transmission congestion, **external firm capacity sales**<sup>111</sup> and available transmission import capability. LSEs shall comply with RAR by demonstrating in accordance with ~~Sections~~<sup>112</sup> **Section**<sup>113</sup> 68 and **Section**<sup>114</sup> 69 **of this Module E**<sup>115</sup> that they have<sup>116</sup> **the LSE has**<sup>117</sup> sufficient Capacity<sup>118</sup> **Planning**<sup>119</sup> Resources to meet Forecast LSE Requirements plus the applicable PRM established either by the Transmission Provider or established by the state having jurisdiction over the applicable LSE.

#### **68.1 The Loss of Load Expectation**

The Transmission Provider shall coordinate with LSEs to determine the appropriate PRMs for the Transmission Provider<sup>120</sup> Region based upon the probabilistic analysis of being able to reliably serve each LSE's Forecast LSE Requirement for each month.<sup>121</sup> Month of the Planning Year.<sup>122</sup> This probabilistic analysis will utilize<sup>123</sup> shall utilize<sup>124</sup> a Loss of Load Expectation ("LOLE") study.<sup>125</sup> The LOLE procedures will be<sup>126</sup> are<sup>127</sup> detailed in the RAR Business Practice Manual<sup>128</sup> Business Practices Manual for Resource Adequacy. The Transmission Provider will initially determine zones consistent with the planning areas set forth in Attachment FF of this Tariff<sup>129</sup>. The Transmission Provider may establish additional<sup>130</sup> zones within the Transmission Provider Region for the study of the LOLE and<sup>131</sup> to address regional issues, such as constrained areas. The associated LOLE studies<sup>132</sup> may establish the need for<sup>133</sup> different PRMs for<sup>134</sup> in<sup>135</sup> such zones.

#### 68.2 Forecast LSE Requirement

Each LSE shall, consistent with Good Utility Practice, determine and periodically update its Forecast LSE Requirement.<sup>136</sup> The Transmission Provider shall coordinate with LSEs to determine the monthly anticipated peak Load<sup>137</sup> integrated hourly<sup>138</sup> Forecast LSE Requirement<sup>139</sup> for an LSE for a given period in time, expressed in MWs. The resulting<sup>140</sup> Forecast LSE Requirement<sup>141</sup> shall reflect the use of Unforced Capacity in measuring compliance.<sup>142</sup>

#### 68.3 Compliance with<sup>143</sup> Rights of<sup>144</sup> State Authorities

Nothing in this Module E shall be interpreted as pre-emption of state authority to establish state<sup>145</sup> reliability standards, safety standards, planning reserve margins, or the enforcement thereof. LSEs within the Transmission Provider Region must comply with all regulations and laws regarding reliability, including but not limited to any reserve margin requirements, of the states in which the Transmission Provider operates where the LSE serves Load<sup>146</sup>. To the extent that an LSE serves Load in two (2) or more states in the Transmission Provider Region, the LSE must comply with the state<sup>147</sup> reliability or resource adequacy requirements of each state in which it serves<sup>148</sup> Load is served<sup>149</sup>.

#### 68.4 Contracts Supporting Reliability Obligations

An LSE may contract with other entities to ensure compliance by the LSE<sup>150</sup> with the RAR requirements<sup>151</sup> of Module E of this Tariff<sup>152</sup>, an RRO or a state, consistent with any RRO or state requirements for, or limitations related to, such contracts. — ~~An LSE that utilizes a contract to demonstrate that it has adequate Capacity Resources to meet its RAR must identify the specific Resource, External Resource or the specific~~

~~Alternative Capacity Resource from which Capacity Resources will be obtained, at least 30 days prior to the Operating Month.~~<sup>153</sup> Details regarding qualifying contracts are set forth<sup>154</sup> in the RAR<sup>155</sup> Business Practice Manual for Resource Adequacy<sup>156</sup>.

## 69 Determination of RAR Compliance<sup>157</sup> Status<sup>158</sup>

The Transmission Provider ~~will, in a~~<sup>159</sup> shall provide<sup>160</sup> non-discriminatory manner, ~~provide~~<sup>161, 162</sup> technical support and expertise that may include, but may<sup>164</sup> not be limited to, conducting studies to establish reserve requirements as described in Section 68 of this Module E<sup>165</sup> in order to ascertain an LSE's PRM for the next Planning Year. The<sup>166</sup> Commencing five (5) Months before the Planning Year, the<sup>167</sup> Transmission Provider will also ~~perform or verify~~<sup>168</sup> determine, through studies, the LSE's<sup>169</sup> PRM for each of the nine subsequent Planning Years to provide information for long-term resource planning, without establishing specific resource planning reserve requirements. To the extent that an LSE has Load in two or more zones, the LSE's PRM will be the weighted PRM of each zone proportional to the LSE's share of Load in each zone.<sup>170</sup> The Transmission Provider will regularly report<sup>171</sup> shall periodically post to its website<sup>172</sup> the results of such analysis ~~on its website~~<sup>173</sup>.

The Transmission Provider ~~will also~~<sup>174</sup> shall<sup>175</sup> validate ~~through tracking tools~~<sup>176</sup> that LSEs have arranged for sufficient Capacity<sup>177</sup> Planning<sup>178</sup> Resources to meet their<sup>179</sup> Forecast LSE Requirements plus the applicable<sup>180</sup> PRM requirements under Section 68 of this tariff<sup>181</sup> Module E<sup>182</sup>. The Transmission Provider ~~will~~<sup>183</sup> shall<sup>184</sup>, upon request, submit RAR information to the applicable RRO, ERO<sup>185</sup> Electric Reliability Organization<sup>186</sup>, State or FERC, subject to the provisions of Section 38.9 of this Tariff<sup>187</sup>. The Transmission Provider will ~~track~~<sup>188</sup> coordinate with LSEs and Market Participants to monitor<sup>189</sup> shifts in load<sup>190</sup> Load<sup>191</sup> for retail switching to ensure meeting reserve requirements. To facilitate capacity<sup>192</sup> Capacity<sup>193</sup> transactions between Market Participants, the Transmission Provider ~~will~~<sup>194</sup> shall<sup>195</sup> administer a title tracking tool that ~~will~~<sup>196</sup> shall<sup>197</sup> permit MPs<sup>198</sup> Market Participants<sup>199</sup> to confirm transfer of title<sup>200</sup> rights under Module E of this Tariff<sup>201</sup> to Capacity Resources permitted to fulfill a LSE's ~~resource adequacy requirements.~~<sup>202</sup> RAR.<sup>203</sup> The system will be a means to track the transfer of title to ~~planning reserves as well as~~<sup>204</sup> Capacity Resources. The system will also provide<sup>205</sup> a means to automate the communication, reporting and monitoring functions under this<sup>206</sup> Module E.

### 69.1 Load Serving Entity Responsibilities

~~Nothing in this Module E shall prohibit any state from requesting data relating to~~<sup>207</sup> ~~reliability standards, safety standards, planning reserve margins, or the enforcement thereof.~~<sup>208</sup> ~~Load Serving Entities will provide sufficient data to the Transmission Provider and will comply with the following provisions to enable~~

~~the Transmission Provider to perform its duties. The Transmission Provider shall report to the affected state commission(s), to the Commission and to the applicable RRO(s) if an LSE does not provide such data or otherwise fails to comply with any of the provisions in Sections 68 or 69.~~<sup>209</sup>

**~~69.1.1 Load Forecasts~~**<sup>210</sup>

~~By March 1 of each year, LSEs must report their annual and monthly anticipated peak Forecast LSE Requirements to the Transmission Provider by their Commercial Pricing Nodes<sup>211</sup> for the upcoming Planning Year. LSEs shall<sup>212</sup> promptly submit updates to such Forecast LSE Requirement projections whenever they become aware of Load changes that will affect prior Forecast LSE Requirements by more than 1%.~~<sup>213</sup>

**~~69.1.2 Designating Capacity Resources~~**<sup>214</sup>

~~No later than thirty (30) days prior to<sup>215</sup> the first day of each calendar month,<sup>216</sup> the Month preceding each Month in the Planning Year<sup>217</sup> each LSE shall demonstrate to the Transmission Provider that for such subsequent calendar month<sup>218</sup> the Month<sup>219</sup> it has designated megawatts of Capacity<sup>220</sup> Planning<sup>221</sup> Resources that qualify pursuant to section 69.2 to serve the LSE's Load in an amount equal to or greater than the Forecast LSE Requirement plus the PRM requirement established in Section 68 that is applicable to such LSE. LSEs shall promptly<sup>222</sup> submit updates to such designated Capacity Resource plans whenever they become aware of Capacity Resource or Forecast LSE Requirement changes that will affect the likelihood of meeting RAR by more than 1%<sup>223</sup> Resource Plans no later than the first day of the Month preceding each Month in the Planning Year. Planning Resources may include Capacity Resources and/or Load Modifying Resources<sup>224</sup>.~~

**69.1.1 Load and Demand Forecasts**<sup>225</sup>

**By March 1 of each Year, LSEs must report annual and monthly Forecast LSE Requirements to the Transmission Provider using the appropriate Commercial Node designations**<sup>226</sup> ~~for the upcoming Planning Year. LSEs shall<sup>227</sup> submit updates to such Forecast LSE Requirements no later than the first day of the Month preceding the Month.~~<sup>228</sup>

### **69.1.2 Designating Planning Resources**<sup>230</sup>

No later than the first Day of the Month preceding the Month each LSE shall demonstrate to the Transmission Provider that for the Month it has designated megawatts of Planning Resources that qualify pursuant to Section 69.2 to serve the LSE's Load in an amount equal to or greater than the Forecast LSE Requirement plus the PRM requirement established in Section 68 that is applicable to such LSE. LSEs shall submit updates to such Planning Resources no later than the first day of the Month preceding the Month.<sup>231</sup>

### **69.1.3 Obtain Firm Transmission Service**

Each LSE shall document to the Transmission Provider that it has obtained sufficient Firm **Point-To-Point**<sup>232</sup> Transmission Service for each month<sup>233</sup> **Month**<sup>234</sup> adequate for delivery of its Capacity Resources to the Commercial Pricing Node in which it serves Load<sup>235</sup> **its Load to be served, and that all Planning Resources designated for serving that Load meet the qualifications of this Module E**<sup>236</sup>.

### **69.1.4 Submit Resource Plans**

Each LSE shall submit to the Transmission Provider its Resource Plans<sup>237</sup> **Planning Resources**<sup>238</sup> or revisions to previously submitted plans) to install or to contract<sup>239 240</sup> for Capacity<sup>241</sup> **Planning**<sup>242</sup> Resources, as follows:

**69.1.4.1** By March 1 of each year, each LSE shall submit to the Transmission Provider its Resource Plans<sup>243</sup> **Planning Resources**<sup>244</sup> for satisfying its RAR for the upcoming Planning Year.

**69.1.4.2** Each LSE shall submit to the Transmission Provider a notice of any change in its Resource Plans for<sup>245</sup> **Planning**<sup>246</sup> Resources and<sup>247</sup> or Forecast LSE Requirements no later than 30 days prior to the start of each month<sup>248</sup> **the first day of the Month preceding the Month**<sup>249</sup> in a Planning Period<sup>250</sup> **Year**<sup>251</sup>.

**69.1.4.3** The Resource Plans<sup>252</sup> **Plan**<sup>253</sup> of each LSE shall indicate the nature and current status of



commitments with respect to each addition, retirement and sale or purchase of Capacity<sup>254</sup> Planning<sup>255</sup> Resources included in its Resource Plans<sup>256</sup> Plan<sup>257</sup>. The Transmission Provider will review the adequacy of the submittals hereunder both as to timing and content.

**69.1.4.4** At the LSE's request, the Transmission Provider will provide an LSE's Resource Plan to the LSE's RRO, state commission or to the Commission or NERC.

#### **69.1.5 Sustained Commitment**

Each LSE shall ~~remain committed to each addition, retirement, sale or purchase of Capacity Resources included in its Resource Plan unless such LSE otherwise notifies~~<sup>258</sup> immediately notify<sup>259</sup> the Transmission Provider of a revised Resource Plan that will comply with RAR<sup>260</sup> any revision to its Resource Plan and shall demonstrate continued adherence to the RAR standards<sup>261</sup>. LSEs shall also remain committed to their<sup>262</sup> the<sup>263</sup> required transmission capability to the extent required to ensure the deliverability of the Capacity Resources to meet the<sup>264</sup> RAR.

#### **69.2 Qualification of Capacity<sup>265</sup> Planning<sup>266</sup> Resources**

Capacity<sup>267</sup> Planning<sup>268</sup> Resources can be used to satisfy RAR requirements as follows:

##### **69.2.1 Designating Capacity<sup>269</sup> Planning<sup>270</sup> Resources**

Resources identified by LSEs as available to meet the reliability requirements determined by the Transmission Provider must comply with the requirements for designation of Capacity<sup>271</sup> Planning<sup>272</sup> Resources, as detailed in the RAR Business Practice Manual,<sup>273</sup> ~~including all state regulations and laws relating to reliability, including but not limited to~~<sup>274</sup> Business Practices Manual for Resource Adequacy. Nothing herein shall infringe upon the requirement that LSEs comply with state<sup>275</sup> reliability standards, safety standards, planning reserve margins, or be subject to<sup>276</sup> the enforcement thereof.

##### **69.2.1.1 Single State or RRO Capacity<sup>277</sup> Planning<sup>278</sup> Resources**

If an LSE serves Load both in the Transmission Provider Region and outside the Transmission Provider

Region within a single state or RRO region, then the LSE must designate ~~Capacity~~<sup>279</sup> Planning<sup>280</sup> Resources in the proportion of its<sup>281</sup> to cover the appropriate PRM for the amount of<sup>282</sup> Load in the Transmission Provider Region within the state or RRO to its total Load within the state or RRO region to comply with RAR requirements<sup>283</sup> and for the amount of Load outside the Transmission Provider Region<sup>284</sup>.

#### 69.2.1.2 ~~Capacity~~<sup>285</sup> Planning<sup>286</sup> Resource Requirements

- a. An LSE may only designate a Resource as a ~~Capacity~~<sup>287</sup> Planning<sup>288</sup> Resource if such LSE possesses ownership or equivalent contractual rights that assure that each such ~~Capacity~~<sup>289</sup> Planning<sup>290</sup> Resource complies with all applicable requirements specified in this Module E. LSEs may satisfy this obligation for Planning<sup>291</sup> Resources by fulfilling either of the following requirements:
  - i. Designating a Capacity Resource or Load Modifying<sup>292</sup> Resource registered with the Transmission Provider by the LSE; or
  - ii. Designating a Capacity Resource Load Modifying<sup>293</sup> Resource registered with the Transmission Provider by another entity and providing proof, as required by the Transmission Provider, that the owner of the Capacity Resource or Load Modifying<sup>294</sup> Resource accepts designation as a ~~Capacity~~<sup>295</sup> Planning<sup>296</sup> Resource and the

responsibility to comply with all applicable requirements of such designation.

b. ~~Resources designated as~~<sup>297</sup>

Capacity Resources must be deliverable to Load within the Transmission Provider Region. The deliverability of Capacity Resources to Network Load within the Transmission Provider Region shall be determined by System Impact Studies pursuant to this Tariff as conducted by the Transmission Provider that consider, among other factors, the deliverability of aggregate ~~Resources~~<sup>298</sup> resources<sup>299</sup> of Network Customers to the aggregate of Network Load.

Capacity Resources may consist of Resources (Generation Resources or Demand Response Resources) and/or External Resources.<sup>300</sup>

c. Generation Resources designated as Capacity Resources must submit to<sup>301</sup> ~~the Transmission Provider~~<sup>302</sup> Generator<sup>303</sup> generator<sup>304</sup> availability data (including, but not limited to, NERC Generation<sup>305</sup> System (“GADS”) information,<sup>306</sup> into a database provided by<sup>307</sup> the Transmission Provider<sup>308</sup> and<sup>309</sup> as established in the RAR<sup>310</sup> Business Practices Manual and be registered to include their generation in the EIA 860 report.<sup>311</sup> for Resource Adequacy.

d. Resources designated as ~~Capacity~~<sup>312</sup> Planning<sup>313</sup> Resources must demonstrate capability on an annual basis as established in the RAR<sup>314</sup> Business Practices Manuals<sup>315</sup> Manual for Resource

Adequacy, commencing five (5) months before the Planning Year<sup>316</sup>. Verification of Capacity<sup>317</sup> Planning<sup>318</sup> Resources for each Network Resource<sup>319</sup> also will be in accordance with the guidelines for Capacity<sup>320</sup> Planning<sup>321</sup> Resource verification set by state authorities or<sup>322</sup> by the applicable RRO, unless superceded by specific verification guidelines set by the applicable state authorities<sup>323</sup>. Capacity Resources will be accredited at their<sup>324</sup> the Capacity Resource's<sup>325</sup> Unforced Capacity rating utilizing the GADS<sup>326</sup> generator or demand availability data<sup>327</sup> information and methods further described in the RAR<sup>328</sup> Business Practices Manual for Resource Adequacy<sup>329</sup>.

- e. An LSE may designate a power purchase agreement as a Capacity Resource so long as the agreement provides for Firm Point-To-Point Transmission Service and meets the requirements set forth below.<sup>330</sup>

A power purchase agreement that identifies a specific Generation Resource internal to the Transmission System as the source of supply shall be designated as an on-system Capacity Resource. An LSE customer seeking to designate a power purchase agreement as an on-system Capacity Resource must provide to the Transmission Provider the information specified in Section 29.2(v) of the Tariff for on-system Network Resources.<sup>331</sup>

Power purchase agreements that do not identify a specific Generation Resource from which

power will be supplied, but rather allow for the power to be supplied from a range of potential Generation Resources may be designated as Capacity Resources only if the potential Generation Resources from which the power will be supplied are all external to the Transmission System. Such agreements shall be designated as off-system Capacity Resources. An LSE seeking to designate a power purchase agreement as an off-system Capacity Resource must provide to the Transmission Provider the information specified in Section 29.2(v) of the Tariff for off-system Network Resources.<sup>332</sup>

Power purchase agreements that include liquidated damages provisions (“LD contracts”) may be designated as a Capacity Resource, either as an on-system Capacity Resource or an off-system Capacity Resource as applicable and consistent with subsections (ii) and (iii) above, only if any such agreement: 1) provides for Firm Point-To-Point Transmission Service, and; 2) the liquidated damages provisions included therein are of a “make whole” type, as described in the Business Practices Manual for Resource Adequacy.<sup>333</sup>

**69.2.1.3 Designation of External Resources as<sup>335</sup>  
Capacity Resources**

Resources that are external to the Transmission Provider Region may qualify as Capacity Resources, provided that the External Resources:

- a. Comply with the contractual obligations of ~~Modules B and E~~ ~~(non-recallable<sup>336</sup> non-recall ability<sup>337</sup>~~ and proof of agreement with the asset owner on designation) ~~of the EMT<sup>338</sup>~~;
- b. Have firm transmission service in the external system from the External Resource to the ~~Midwest ISO<sup>339</sup>~~ **Transmission Provider<sup>340</sup>** border and such service has been evaluated by the Transmission Provider for deliverability **to the LSE's Load<sup>341</sup>** within the Transmission Provider Region;
- c. Do not ~~negatively impact<sup>342</sup>~~ **cause<sup>343</sup>** existing deliverable resources within the Transmission Provider Region **to become non-deliverable<sup>344</sup>**;
- d. The capacity portion identified for delivery to the Transmission Provider Region has verification of capacity in the RRO in which the resource is located, and that the portion identified for delivery to Transmission Provider Region is shown to not be also assigned to a non-~~Midwest ISO<sup>345</sup>~~ **Transmission Provider<sup>346</sup>** load serving obligation **entity<sup>347</sup>**; and
- e.<sup>349</sup> External Resources designated as Capacity Resources must demonstrate capability on an annual

basis as established in the RAR  
<sup>350</sup>Business Practices ~~Manuals and~~  
~~reported in EIA 860~~  
reports<sup>351</sup> Manual for Resource  
Adequacy<sup>352</sup>. Designated External  
Resources will be accredited at  
their<sup>353</sup> ~~the~~<sup>354</sup> Unforced Capacity  
rating utilizing the  
GADS<sup>355</sup> generator availability  
data<sup>356</sup> information and methods  
further described in the RAR  
<sup>357</sup>Business Practices Manual for  
Resource Adequacy<sup>358</sup>.

<sup>359</sup>

**f. Nothing in this Module E imposes any new obligations on existing External Resources that have been accepted by the Transmission Provider and confirmed by Network Customers as designated Network Resources under the OASIS reservation process in place prior to the effective date of this Tariff.**<sup>360</sup>

**69.2.1.4 Determination of Compliance with  
Capacity<sup>361</sup> Resource Adequacy<sup>362</sup>  
Requirements**

The Transmission Provider shall be responsible for determining whether LSEs have appropriately designated Capacity Resources that are deliverable to Load. Deliverability of Capacity Resources will be determined through the following processes:

- a. An analysis of aggregate deliverability will be performed through a System Impact Study for all candidate Capacity Resources that request Network Resource Interconnection Service under Attachment R ~~or Attachment~~<sup>363</sup> X to this Tariff. The deliverability study will include validation that a new

candidate Capacity Resource can be dispatched along with all other Network Resources specified by Network Customers in the vicinity of the newly designated candidate Capacity Resource. Generation Resources that have Energy Resource Interconnection Service<sup>364</sup> under Attachment X may become eligible to be a Capacity Resource for a specific LSE's Network Load through a request for Firm Transmission Service made under Module B of this Tariff<sup>365</sup>.

- b. Generation Resources that have been interconnected to the system prior to Network Resource Interconnection Service being offered as an interconnection service under the Tariff, or that have been interconnected with Energy Resource Interconnection Service, may request the performance of a deliverability study by making a request for Network Resource Interconnection Service under Attachment X or Attachment R to the Tariff.
- c. ~~The Transmission Provider performed a Market Transition Deliverability Test of all existing Generation Resources interconnected to the Transmission System prior to the start of the Day-Ahead Energy Market. This deliverability test evaluated the aggregate deliverability of these existing resources on a basis comparable to the deliverability tests applicable to Network<sup>367</sup> Resource Interconnection Service<sup>368</sup> – <sup>369</sup> d. Existing~~ Generation Resources, or portions thereof, that did not pass the Market Transition Deliverability Test may



request evaluation of upgrades necessary to qualify the entire Generation Resource as aggregate deliverable by requesting Network Resource Interconnection Service. Such requests shall be made and shall be queued for evaluation under the procedures of Attachment X ~~or Attachment R~~<sup>371</sup> of this Tariff<sup>372</sup>, as applicable.

<sup>373</sup> **d**<sup>374</sup>. Generation Resources that have been accepted by the Transmission Provider and confirmed by Network Customers as designated Network Resources under the OASIS reservation process in place prior to the effective date of this Tariff will be accepted by the Transmission Provider as deliverable to the Network Loads of the Network Customer for the term of the confirmed designation. Such Generation Resources must be evaluated for aggregate deliverability and be certified deliverable in order to qualify as a Capacity Resource for the Network Customer for periods beyond the confirmed designation, or in order to qualify as a Capacity Resource for any other Network Customer.

**e. Absent deliverability pursuant to this Tariff, a Resource shall qualify as a Capacity Resource if the LSE has obtained Firm Transmission Service from the Resource to the LSE's Load and are subject to all other Capacity Resource requirements, including the must offer requirements of Section 69.2.3.**<sup>375</sup>

**69.2.2 Alternative Capacity<sup>376</sup> Load Modifying<sup>377</sup> Resources**

The following resources will be designated as ~~Alternative Capacity Resources, notwithstanding the fact that such resources may fail to meet all of the criteria to be designated as a Network Resource.~~ ~~Alternative Capacity~~<sup>378</sup> **Load Modifying Resources: Demand Resources and Behind-the-Meter Generation. Load Modifying**<sup>379</sup> Resources (“LMRs”)<sup>380</sup> can be utilized to meet RAR requirements<sup>381</sup> even if they do not qualify as a Network Resource, however all ~~Alternative Capacity~~<sup>382</sup> **Load Modifying**<sup>383</sup> Resources utilized to meet RAR requirements<sup>384</sup> must be registered with the Transmission Provider in accordance with Section 69.1.4.<sup>385</sup> ~~Alternative Capacity Resources~~<sup>386</sup> **All LMRs**<sup>387</sup> utilized to meet RAR requirements<sup>388</sup> must be available for use in the event of an Emergency as declared by the Transmission Provider, **prior to the use of Operating Reserves to meet the energy balance,**<sup>389</sup> pursuant to the Emergency Operating Procedures of the Transmission Provider and in accordance with prohibitions and restrictions under state laws, rules, standards and permits.

Demand Resources (“DR”)<sup>390</sup> and Behind-the-Meter Generation Resources (“BTM”)<sup>391</sup> not reported in EIA 860 reports may either be recognized as a Load Modifier or as a Capacity Resource<sup>392</sup> **must be used to reduce the Forecast LSE Requirement**<sup>393</sup> in the RAR calculation, as specified by the MP<sup>394</sup> **Market Participant**<sup>395</sup> registering the ~~Alternative Capacity~~<sup>396</sup> **Load Modifying**<sup>397</sup> Resource with the Transmission Provider in accordance with Section 69.1.4.<sup>398</sup> **69.1.4 of this Module E,**<sup>399</sup>

#### 69.2.2.1 Demand Resources

The Transmission Provider shall develop procedures for accrediting, testing, validating, measuring, and verifying, all Demand Resources claimed by a LSE as ~~Alternative Capacity Resources.~~<sup>400</sup> **a Load Modifying Resource consistent with the procedures specified in the Business Practices Manual for Resource Adequacy.**<sup>401</sup> The accrediting, testing, validation, measurement and verification procedures developed by the Transmission Provider shall take into account any applicable state regulatory, **RRO**<sup>402</sup> or other non-jurisdictional entities requirements regarding duration, frequency and notification

processes for the candidate DR<sup>402</sup> **Demand Resources**<sup>403</sup>. The accrediting procedures shall also take into account deliverability and availability for the Planning Year as well as for any term longer than the Planning Year to meet **the Load**<sup>404</sup> ~~Forecast Load~~<sup>405</sup>.

~~69.2.2.1.a~~<sup>406</sup> **a.**<sup>407</sup> **Requirements for Demand Resources**<sup>408</sup> ~~as Alternative Capacity Resources~~<sup>409</sup>

For any DR<sup>410</sup> **Demand Resource**<sup>411</sup> to qualify to receive capacity credit (as either the equivalent of a Capacity Resource or<sup>412</sup> as a Load Modifier<sup>413</sup> **Modifying Resource**<sup>414</sup>, at the targeted MW level) in the calculation to determine if a LSE has met the RAR requirement, that DR<sup>415</sup>, **the Demand Resource**<sup>416</sup> must meet the<sup>417</sup> all the requirements specified below. The targeted MW level is defined to be the MW level at which capacity credit is taken for any given month for a particular DR option, whether as a Load Modifier or as the equivalent of a Capacity Resource<sup>418</sup> **Demand Resource option. These requirements shall not become effective until three (3) months before the Planning Year**<sup>419</sup>.

- ~~1.~~<sup>420</sup> **i.**<sup>421</sup> The DR<sup>422</sup> **Demand Resource**<sup>423</sup> must be equal to or greater than 100 kW (a grouping of smaller resources may qualify in meeting this standard).
- ~~2.~~<sup>424</sup> **ii.**<sup>425</sup> The DR<sup>426</sup> **Demand Resource**<sup>427</sup> must be available to be scheduled for a load reduction at the targeted load reduction level with no more than 12 hours advisory notice.

3. ~~Once scheduling instructions~~<sup>428</sup> iii. Once Scheduling Instructions<sup>429</sup> are given by the Transmission Provider that require a load reduction, the DR<sup>430</sup> Demand Resource<sup>431</sup> must be capable of ramping down to meet the targeted load reduction level ~~in two hours or less~~<sup>432</sup> by the Hour designated by the Transmission Provider's Scheduling Instructions<sup>433</sup>.
4. ~~iv.~~<sup>434</sup> iv.<sup>435</sup> Once the targeted level of load<sup>436</sup> Load<sup>437</sup> reduction is achieved, the DR<sup>438</sup> Demand Resource<sup>439</sup> must be able to maintain the target level of load<sup>440</sup> Load<sup>441</sup> reduction for at least four continuous hours.
- v.<sup>442</sup> 5. ~~v.~~<sup>442</sup> The DR<sup>443</sup> Demand Resource<sup>444</sup> must be capable of being interrupted at least five (5)<sup>445</sup> times during the peak load season<sup>446</sup> ~~(when called upon by the Transmission Provider)~~<sup>447</sup> during any Planning Year for which capacity credit is given.
6. ~~vi.~~<sup>448</sup> vi.<sup>449</sup> Unless the Load associated with a DR<sup>450</sup> Demand Resource<sup>451</sup> that would normally be available for interruption is already off the ~~system~~<sup>452</sup> Transmission System<sup>453</sup> for external reasons such as maintenance outages, etc., when a DR load<sup>454</sup> Demand Resource

Load<sup>455</sup> reduction is requested by the Transmission Provider, the resultant load<sup>456</sup> Load<sup>457</sup> reduction must be a reduction that would not have otherwise occurred within the next twenty-four (<sup>458</sup>24)<sup>459</sup> hour period. There should be no penalties assessed to a DR that<sup>460</sup> Market Participant using Demand Resource as a capacity credit if the Demand Resource<sup>461</sup> is unavailable for interruption due to its load<sup>462</sup> Load<sup>463</sup> being off the system<sup>464</sup> Transmission System<sup>465</sup> for external reasons, or in the event the targeted load reduction had already been accomplished for other reasons (*i.e.*<sup>466</sup>, economic considerations or local reliability concerns).

7-DR<sup>467</sup> Demand Resource<sup>468</sup> in which curtailment is an economic option and is not an obligation during Emergency events declared by the Transmission Provider pursuant to the Transmission Provider Emergency Operating Procedures<sup>469</sup> will not qualify as <sup>470</sup>an Alternative Capacity<sup>471</sup> a Load Modifying<sup>472</sup> Resource.<sup>473</sup> 8. There can be only one MP claiming the DR<sup>474</sup> capacity credit associated with the <sup>475</sup>load reduction capability.  
<sup>476</sup>

viii. There can be only one Market Participant claiming the Demand Resource<sup>477</sup> capacity credit associated with the <sup>478</sup>Load reduction capability.<sup>479</sup>

9. DRs may be <sup>480</sup>ix. Demand Resources<sup>481</sup> offered into the Day-Ahead and/or Real-Time Energy Markets as price sensitive <sup>482</sup>load bids. However, for these resources to

qualify for use in meeting RAR requirements, DRs submitting price sensitive load bids: 1) must meet all the other requirements specified above for DR qualification as an Alternative Capacity Resource, and 2) must be available<sup>483</sup> **Bids**<sup>484</sup> are obligated to be interrupted during an Emergency pursuant to the Transmission Provider Emergency Operating Procedures regardless of the projected or actual Real-Time Energy Market LMP.<sup>485</sup>

## 69.2.2.2 Behind-the-Meter Generation

### 69.2.2.2.a<sup>487</sup> a.<sup>488</sup> Behind-the-Meter Generation Interconnected under Transmission Provider Procedures and Agreements

The Transmission Provider shall develop procedures for commitment and dispatch of BTMs<sup>489</sup> Behind-the-Meter Generation (“BTMG”)<sup>490</sup> interconnected into the Transmission Provider Region under the Transmission Provider’s interconnection procedures and agreements that is designated by an LSE as an Alternative Capacity Resource<sup>491</sup> a BTMG resource<sup>492</sup>. Such procedures shall be consistent with the information provided by the LSE and at a minimum will provide for the commitment and dispatch of the generation, when available, during declared Emergencies prior to the use of Operating Reserves to meet the energy balance. The LSE shall notify the Transmission Provider of<sup>493</sup> when<sup>494</sup> the status and<sup>495</sup> or<sup>496</sup> availability of the unit on a daily basis<sup>497</sup> changes, except for de minimus changes that do not need to be reported,<sup>498</sup> according to procedures specified in the RAR<sup>499</sup> Business Practices Manual for Resource Adequacy<sup>500</sup>.

The Transmission Provider shall coordinate with LSEs that own or control such ~~BTMs~~<sup>501</sup> **BTMG**<sup>502</sup> to commit and dispatch the units when necessary.

~~69.2.2.2.b~~<sup>503</sup> b.<sup>504</sup> **Behind-the-Meter Generation Interconnected under State Regulatory Procedures and Agreements**

~~BTMs~~<sup>505</sup> **BTMG resources**<sup>506</sup> interconnected to the local distribution system consistent with state regulatory procedures and agreements may be claimed as ~~an~~ **Alternative Capacity**<sup>507</sup> **a** **Load Modifying**<sup>508</sup> Resource by a LSE, but may not be committed for dispatch by the Transmission Provider during declared Emergencies where prohibited by state law and regulations. Where no state regulatory prohibitions exist, dispatch of such ~~BTM~~<sup>509</sup> **BTMG**<sup>510</sup> shall be consistent with the information provided by the LSE or by a Curtailment Service Provider<sup>511</sup> and at a minimum will provide for the commitment and dispatch of the generation, when available, during declared Emergencies. The Market Participant shall notify the Transmission Provider of the status and availability of the unit on a daily basis according to procedures specified in the Business Practices Manuals. The



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Transmission Provider shall  
coordinate with Market  
Participants that own or  
control such  
~~BTM~~<sup>512</sup> BTMG<sup>513</sup> to commit  
and dispatch the units when  
necessary.

### 69.2.2.3 **Penalty Provisions for Alternative Capacity<sup>515</sup> Load Modifying<sup>516</sup> Resources**

Unless the Alternative Capacity Resource<sup>517</sup> **LMR**<sup>518</sup> is unavailable as a result of maintenance requirements or for reasons of Force Majeure, the **Market Participant representing the**<sup>519</sup> LSE<sup>520</sup> which has received credit for the use of an Alternative Capacity Resource<sup>521</sup> **LMR**<sup>522</sup> in meeting RAR requirements will be subject to the following penalties in the event the Alternative Capacity Resource<sup>523</sup> **LMR**<sup>524</sup> is called upon during an Emergency as declared by the Transmission Provider and fails to respond, or does not respond at the targeted level of load reduction. The penalties defined below will only apply for the portion of the targeted level of load reduction that is not achieved during the Emergency declaration. There will not be a penalty assessed for any portion of the targeted load reduction which had already been accomplished for other reasons (*i.e.*<sup>525</sup>, for economic considerations or local reliability concerns) at the time the request for interruption is made by the Transmission Provider. Likewise, for certain DRs<sup>526</sup> **Demand Resources**<sup>527</sup> that are temperature dependant (*i.e.*<sup>528</sup>, a DR<sup>529</sup> **Demand Resource**<sup>530</sup> program involving air conditioning load), the expected targeted level of load reduction may be adjusted in a manner defined in the measurement and verification procedures developed by the Transmission Provider to reflect the circumstances at the time DR<sup>531</sup> **Demand Resource**<sup>532</sup> is called upon to reduce load.

**69.2.2.3.a** ~~The responsible entity shall reimburse the LSEs in the Local Balancing Area (or the~~<sup>533</sup> **a. The**<sup>534</sup> Transmission Provider Region, as applicable)<sup>535</sup> ~~on a load ratio share basis~~<sup>536</sup> **shall assess the responsible Market Participant in Section 69.2.2.3**<sup>537</sup> the costs that were

otherwise incurred to replace the deficient resource at the time the ~~Alternative Capacity Resource~~<sup>538</sup> **LMR**<sup>539</sup> is called upon by the Transmission Provider **and does not respond. The Transmission Provider shall allocate such revenues to the Market Participants representing the LSEs in the local Balancing Authority Area(s) that experienced the Emergency**<sup>540</sup> on a load ratio share basis<sup>541</sup>. For any situation where either an ~~Alternative Capacity Resource~~<sup>542</sup> **LMR**<sup>543</sup> does not respond to an interruption request, including those circumstances where the resource is claimed to be unavailable as a result of maintenance requirements or for reasons of Force Majeure, the Transmission Provider shall initiate an investigation with the ~~MP~~<sup>544</sup> **Market Participant**<sup>545</sup> which has received credit for the use of an ~~Alternative Capacity Resource~~<sup>546</sup> **LMR**<sup>547</sup> into the cause of the resource not being available when called upon to reduce Load, and may, if deemed appropriate by the Transmission Provider, disqualify that resource from further utilization in meeting future RAR requirements<sup>548</sup>.

**69.2.2.3.b**<sup>549</sup> **b.**<sup>550</sup> In the event the same ~~Alternative Capacity Resource~~<sup>551</sup> **LMR is**<sup>552</sup> unavailable on a second

occasion (with at least a separation period of 24 hours) when called upon to reduce Load, except for a validated circumstance of maintenance requirements or for reasons of Force Majeure, that resource shall make the same penalty payment as indicated in section 69.2.2.3.a above, and will no longer be eligible for utilization by any ~~MP~~<sup>553</sup> **Market Participant**<sup>554</sup> in meeting RAR requirements **for the remainder of the current Planning Year and for the next Planning Year**<sup>555</sup>.

### 69.2.3 Capacity<sup>557</sup> Planning<sup>558</sup> Resource Must Offer Requirement

Self-Schedules or Offers must be submitted for Capacity Resources ~~(except for Alternative Capacity Resources)~~,<sup>559</sup> consistent with requirements specified in the RAR<sup>560</sup> Business Practices Manual for Resource Adequacy<sup>561</sup>, in the Day-Ahead Energy Market and all pre-Day Ahead and<sup>562</sup> the first post Day-Ahead<sup>563</sup> Reliability Assessment Commitment, except to the extent that the Capacity Resource is unavailable due to a full or partial forced or scheduled outage consistent with this Tariff. Self-Schedules or Offers must be submitted for Capacity Resources for each Hour during the Operating Month.<sup>564</sup> Outages must be reported in the Transmission Provider's Outage Scheduler. Must Offer<sup>565</sup> offer<sup>566</sup> requirements specified in the RAR<sup>567</sup> Business Practices Manual for Resource Adequacy<sup>568</sup> will reflect resource operational limitations, including those related to fuel limited, energy output limited or Intermittent Resources,<sup>569</sup> and<sup>570</sup> including all state regulations and laws relating to reliability, including but not limited to state<sup>571</sup> reliability standards, safety standards, planning reserve margins, or the enforcement thereof. ~~Alternative Capacity~~<sup>572</sup> Load Modifying<sup>573</sup> Resources are subject to a must-offer requirement during an Emergency as declared by the Transmission Provider Emergency Operating Procedures as specified in Section 69.2.2. Such Emergency must offer requirements specified in the Resource Adequacy Business Practices Manual will reflect Load Modifying Resource operational limitations, including those related to fuel limited, energy output limited and<sup>574</sup> including all state regulations and laws relating to reliability, including but not limited to<sup>575</sup> state<sup>576</sup> reliability standards, safety standards, planning reserve margins, or the enforcement thereof.<sup>577</sup>

Operating Reserve, consistent with the terms of Module C, will be deemed to have satisfied the requirement to Self-Schedule or Offer in the Day-Ahead Energy Market. At its sole discretion, the Transmission Provider may curtail Exports sourced at a Capacity Resource ~~or from the Energy Markets~~<sup>578</sup> during a declared Emergency. Procedures for such curtailments shall be specified in the Business Practices Manuals. The Transmission Provider may not curtail Export<sup>579</sup> Generation Resources ~~responding~~<sup>580</sup> that deliver energy outside of the Transmission Provider Region and that properly respond<sup>581</sup> to reserve activation in accordance with the terms and conditions of a Regional Reserve Sharing Agreement during the time such reserve activation is effective and when these resources are not Capacity Resources<sup>582</sup>.

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### 69.3-Compliance<sup>584</sup> Reports<sup>585</sup>

#### 69.3.1 State RAR Standards

The Transmission Provider will assist states in meeting any of their<sup>586</sup> state RAR standards by providing relevant ~~Load and Capacity~~<sup>587</sup> Resource Plan<sup>588</sup> information as available and as may be requested by States, subject to the data confidentiality provisions of the EMT in Section 38.9.<sup>589</sup> Nothing in this Module E shall prohibit any state from requesting data relating to state<sup>590</sup> reliability standards, safety standards, planning reserve margins, or the enforcement thereof.

#### 69.3.2 Notification of RAR Status

The Transmission Provider will maintain data bases and will report to states upon request the extent to which each LSE has met or has not met the requirements in Section 69.1 during relevant time periods.

#### 69.3.3 Facilitation of a Voluntary Capacity Exchange

The Transmission Provider shall maintain and enhance an electronic bulletin board platform that may be used by Market Participants to facilitate the ability of Market Participants that have excess Capacity Resources to confidentially enter into voluntary bilateral transactions with LSEs that have the need for Capacity Resources. The prices and quantities<sup>591</sup> of such confidential transactions, but not the names of the parties or the Capacity Resources<sup>592</sup>, will be made public four (4) months after the fact to facilitate Capacity Resource price transparency. The development of the electronic bulletin board platform will occur through the Transmission Provider's stakeholder process and the characteristics of the platform will be specified in the Business Practices Manual for Resource Adequacy.<sup>593</sup>

#### 69.3.4 After the Fact Load and Capacity<sup>594</sup> Planning<sup>595</sup> Resource Assessment

On a monthly basis, the Transmission Provider will ~~determine the Peak Requirement~~<sup>596</sup> shall review data<sup>597</sup> for the prior month<sup>598</sup> Month<sup>599</sup> for an LSE and then ~~review actual data from such period~~<sup>600</sup> to evaluate the accuracy of the Forecast LSE Requirements submitted by each LSE for such month. If during a Planning Year<sup>601</sup> the Transmission Provider determines, ~~based on its review~~<sup>602</sup>, that the Forecast LSE Requirements under-forecasts the Load, after accounting for any extreme weather conditions during such month, the Transmission Provider will notify the LSE of the deficiency. ~~If a~~<sup>603</sup> and request a written response detailing the reasons for the deficiency. If the<sup>604</sup> deficiency, after weather normalization, is statistically significant<sup>605</sup> with respect to an LSE's Forecast LSE Requirement~~-occurs~~<sup>606 607</sup>, either for three (3) consecutive months or for one (1) month between June and September, then the Transmission Provider will

address the uncertainty caused by the LSE's deficient hourly Forecast LSE Requirements by: (i) informing applicable State authorities; and (ii) on the Transmission Provider's website, publishing for ninety (<sup>608</sup>90)<sup>609</sup> days the identity of the deficient<sup>610</sup> such<sup>611</sup> LSE and the period(s) of the deficiency. <sup>612</sup>

**~~69.3.5 LSE Compliance with RAR~~**<sup>613</sup>

~~The Transmission Provider shall request a 180 day extension of time to file enforcement provisions with the FERC in order to allow additional time for continuing discussions with the Organization of MISO States and with other interested stakeholders.~~<sup>614</sup>

**~~69.4 Transition Period~~**~~The Transmission Provider will commence prompt implementation of the provisions in Sections 68 and 69 upon Commission approval. Given the need for an equitable transition period, the provisions in Sections 69.3.3 and 69.3.4 will not be implemented by the Transmission Provider until February 1, 2009.~~<sup>615</sup>



<sup>616</sup>Proposed New Definitions<sup>617</sup> for Module E<sup>618</sup>

**Planning Reserve Margin:** the<sup>619</sup> percentage of Capacity Resources that an LSE must maintain<sup>620</sup> above its Forecast LSE Requirement for planning purposes<sup>621</sup> to reliably be able to serve Load based upon a one occurrence in ten years probability analysis.<sup>622</sup>

**Resource Adequacy Requirements (“RAR”):**<sup>623</sup> the<sup>624</sup> planning reserve procedures<sup>625</sup> found in Section 68 and 69 of the Tariff and the RAR<sup>626</sup> Business Practices Manual to ensure that there are adequate<sup>627</sup> Capacity<sup>628</sup> Resources available to enable LSEs to reliably serve<sup>629</sup> load.<sup>630</sup>

**Capacity Resources:** the Generation Resources or Alternate Capacity<sup>631</sup> Resources that are available to meet peak Load demand<sup>632</sup>

**Loss of Load Expectation:** the expected number of days in the year, in a probabilistic sense, when the daily peak demand exceeds the available Capacity Resources<sup>633</sup>

**Forecast LSE Requirement:**<sup>634</sup> the expected peak Load demand<sup>635</sup> for an LSE for a given time period based upon considerations including, but not limited to, anticipated weather conditions and expected Load changes.<sup>636</sup>

**Planning Year:**<sup>637</sup> the<sup>638</sup> period of time from June 1 of one year to May 31 of the following year that is used for developing Resource Plans.<sup>639</sup>

**Resource Plans:** the plans<sup>640</sup> made by an LSE to ensure that its Forecast LSE Requirement plus PRM will be met or be exceeded by the<sup>641</sup> Capacity<sup>642</sup> Resources designated by the LSE.<sup>643</sup>

**Capacity Resource Transaction Price:** the charge per MW/month of qualified Resources that are available to achieve Resource Adequacy Requirements.<sup>644</sup>

**Unforced Capacity:** the<sup>645</sup> amount of available capacity of a Capacity<sup>646</sup> Resources<sup>647</sup> after accounting for that resource's forced outage<sup>648</sup> amount.<sup>649</sup>

**Peak Requirement:** the maximum hourly Load during the Planning Year or during a month that the Transmission Provider determines is the highest Load for an LSE.<sup>650</sup>

~~Curtailment Service Provider:~~ an entity that is responsible for coordinating demand reductions from multiple end-use customers.<sup>651</sup>

~~Excess Capacity Resources:~~<sup>652</sup>

~~Alternative Capacity Resource (“ACR”):~~<sup>653</sup>

~~Load Modifier:~~<sup>654</sup>

~~Behind-the-Meter Generation Resource:~~<sup>655</sup>

~~Demand Resource:~~<sup>656</sup>

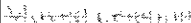
On a monthly basis, the Transmission Provider shall review data to evaluate the accuracy of the Resources Plan submitted by LSEs to ascertain whether such Planning Resources were in fact available and able to serve Load. If the Planning Resources identified by an LSE are insufficient to meet the Forecast LSE Requirements plus PRM and the deficiency is statistically significant either for three (3) consecutive months or for one (1) month between June and September, then the Transmission Provider will address the insufficiency by: (i) informing applicable State authorities; and (ii) on the Transmission Provider’s website, publishing for ninety (90) days the identity of the such LSE and the period(s) of the deficiency.<sup>657</sup>

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Document comparison by Workshare Professional on Tuesday, December 18, 2007 4:36:15 PM

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Deletions		283
Moved from		25
Moved to		25
Style change		0
Format changed		12
Total changes		658

Proposed New Definitions in Module A to be used in Module E

**Planning Reserve Margin (“PRM”):** The percentage of Capacity Resources that an LSE must maintain for planning purposes, above the difference in its Forecast LSE Requirement and Load Modifying Resources, to reliably be able to serve Load based upon a one occurrence in ten years probability analysis.

**Resource Adequacy Requirements (“RAR”):** The planning reserve procedures and requirements found in Module E of the Tariff and the Resource Adequacy Business Practices Manual to ensure that there are adequate Planning Resources available to enable LSEs to reliably serve Load.

**Capacity Resources:** The Resources and External Resources that are available to meet peak Load demand, including Generation Resources and Demand Response Resources.

**Loss of Load Expectation (“LOLE”):** The LOLE probability criteria shall be loss of load no greater than 0.1 day in one (1) year, which equals the sum of the loss of load probability for the integrated daily peak hour for each day of the year.

**Forecast LSE Requirement:** The expected Demand for an LSE for a given time period based upon considerations including, but not limited to, anticipated weather conditions and expected Load changes.

**Planning Year:** The period of time from June 1 of one year to May 31 of the following year that is used for developing Resource Plans. The first Planning Year will commence on June 1, 2009.

**Resource Plan:** The plan made by an LSE to ensure that its Forecast LSE Requirement plus PRM will be met or be exceeded by the Planning Resources designated by the LSE.

**Unforced Capacity:** The amount of available capacity of a Capacity Resource after accounting for that resource's forced outage rate.

**Load Modifying Resource (“LMR”):** A Demand Resource or Behind-the Meter Generation.

**Demand:** The maximum integrated hourly sum of Load occurring over a specified period, such as a day, month, season, or annual in MW.

**Scheduling Instruction:** Directives issued by the Transmission Provider to Market Participants with Load Modifying Resources indicating MW quantities to be reduced during Emergencies.

**Use-Limited Resource:** Resources, including but not limited to, Generation Resources with limited use due to emission levels or DRRs with reduced capacity due to weather or duration use.

**Planning Resource:** Resources that can be used to satisfy the RAR including Capacity Resources and Load Modifying Resources.

**Demand Resource:** Interruptible Load or Direct Control Load Management.

**Behind the Meter Generation:** Generating resources that are not in the Transmission Provider Energy Markets and have an obligation to be available under Emergencies.

**MODULE E – RESOURCE ADEQUACY**

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## **MODULE E - RESOURCE ADEQUACY**

### **I. INTRODUCTION**

This Module E provides mandatory requirements to be met by the Transmission Provider, Market Participants serving Load in the Transmission Provider Region or serving Load on behalf of a Load Serving Entity (“LSEs”) and other Market Participants to ensure access to deliverable, reliable and adequate Planning Resources to meet load requirements on the Transmission System. The requirements established in this Module E recognize and are complimentary with the reliability mechanisms of the states and the Regional Reliability Organizations (“RRO”) within the Transmission Provider Region. Planning Reserve Margin (“PRM”) levels will be determined by analytical study methods in the Module E process. If higher or lower PRMs are mandated by certain states, then the Transmission Provider shall recognize and incorporate such PRMs for any affected LSEs. Nothing in this Module E affects existing state jurisdiction over the construction of additional capacity or the authority of states to set and enforce compliance with standards for adequacy. The Resource Adequacy Requirements (“RAR”) in this Module E are not intended to in any way affect state actions over entities under the states’ jurisdiction.

### **II. RESOURCE ADEQUACY REQUIREMENTS**

#### **68 Determination of Planning Resource Obligations**

Commencing five (5) Months before the Planning Year, the Transmission Provider shall perform analysis on an annual basis to establish the PRMs for each LSE in the Transmission Provider Region. The analysis shall be consistent with Good Utility Practices and the reliability requirements of the RROs and applicable states in the Transmission Provider Region. The PRM analysis shall *consider factors including, but not limited to:* the Generator Forced Outage rates of Capacity Resources, Generator Planned Outages, expected performance of Load Modifying Resources, Load Forecast uncertainty, system operating reserve requirements, transmission congestion, external firm capacity sales and available transmission import capability. LSEs shall comply with RAR by demonstrating in accordance with Section 68 and Section 69 of this Module E that the LSE has sufficient Planning Resources to meet Forecast LSE Requirements plus the applicable PRM established either by the Transmission Provider or established by the state having jurisdiction over the applicable LSE.

#### **68.1 The Loss of Load Expectation**

The Transmission Provider shall coordinate with LSEs to determine the appropriate PRMs for the Transmission Provider Region based upon the probabilistic analysis of being able to reliably serve each



LSE's Forecast LSE Requirement for each Month of the Planning Year. This probabilistic analysis shall utilize a Loss of Load Expectation ("LOLE") study. The LOLE procedures are detailed in the Business Practices Manual for Resource Adequacy. The Transmission Provider will initially determine zones consistent with the planning areas set forth in Attachment FF of this Tariff. The Transmission Provider may establish additional zones within the Transmission Provider Region to address regional issues, such as constrained areas. The associated LOLE studies may establish the need for different PRMs in such zones.

#### **68.2 Forecast LSE Requirement**

Each LSE shall, consistent with Good Utility Practice, determine and periodically update its Forecast LSE Requirement. The Transmission Provider shall coordinate with LSEs to determine the monthly anticipated peak integrated hourly Forecast LSE Requirement for an LSE for a given period in time, expressed in MWs.

#### **68.3 Rights of State Authorities**

Nothing in this Module E shall be interpreted as pre-emption of state authority to establish state reliability standards, safety standards, planning reserve margins, or the enforcement thereof. LSEs within the Transmission Provider Region must comply with all regulations and laws regarding reliability, including but not limited to any reserve margin requirements, of the states in which the Transmission Provider operates where the LSE serves Load. To the extent that an LSE serves Load in two (2) or more states in the Transmission Provider Region, the LSE must comply with the state reliability or resource adequacy requirements of each state in which Load is served.

#### **68.4 Contracts Supporting Reliability Obligations**

An LSE may contract with other entities to ensure compliance by the LSE with the RAR of Module E of this Tariff, an RRO or a state, consistent with any RRO or state requirements for, or limitations related to, such contracts. Details regarding qualifying contracts are set forth in the Business Practice Manual for Resource Adequacy.

### **69 Determination of RAR Status**

The Transmission Provider shall provide non-discriminatory technical support and expertise that may include, but may not be limited to, conducting studies to establish reserve requirements as described in Section 68 of this Module E in order to ascertain an LSE's PRM for the next Planning Year. Commencing five (5) Months before the Planning Year, the Transmission Provider will also determine, through studies, the LSE's PRM for each of the nine subsequent

Planning Years to provide information for long-term resource planning, without establishing specific resource planning reserve requirements. To the extent that an LSE has Load in two or more zones, the LSE's PRM will be the weighted PRM of each zone proportional to the LSE's share of Load in each zone. The Transmission Provider shall periodically post to its website the results of such analysis.

The Transmission Provider shall validate that LSEs have arranged for sufficient Planning Resources to meet Forecast LSE Requirements plus the applicable PRM requirements under Section 68 of this Module E. The Transmission Provider shall, upon request, submit RAR information to the applicable RRO, Electric Reliability Organization, State or FERC, subject to the provisions of Section 38.9 of this Tariff. The Transmission Provider will coordinate with LSEs and Market Participants to monitor shifts in Load for retail switching to ensure meeting reserve requirements. To facilitate Capacity transactions between Market Participants, the Transmission Provider shall administer a title tracking tool that shall permit Market Participants to confirm transfer of rights under Module E of this Tariff to Capacity Resources permitted to fulfill a LSE's RAR. The system will be a means to track the transfer of title to Capacity Resources. The system will also provide a means to automate the communication, reporting and monitoring functions under this Module E.

#### **69.1 Load Serving Entity Responsibilities**

No later than the first day of the Month preceding each Month in the Planning Year each LSE shall demonstrate to the Transmission Provider that for the Month it has designated megawatts of Planning Resources that qualify pursuant to section 69.2 to serve the LSE's Load in an amount equal to or greater than the Forecast LSE Requirement plus the PRM requirement established in Section 68 that is applicable to such LSE. LSEs shall submit updates to such Resource Plans no later than the first day of the Month preceding each Month in the Planning Year. Planning Resources may include Capacity Resources and/or Load Modifying Resources.

##### **69.1.1 Load and Demand Forecasts**

By March 1 of each Year, LSEs must report annual and monthly Forecast LSE Requirements to the Transmission Provider using the appropriate Commercial Node designations for the upcoming Planning Year. LSEs shall submit updates to such Forecast LSE Requirements no later than the first day of the Month preceding the Month.

### **69.1.2 Designating Planning Resources**

No later than the first Day of the Month preceding the Month each LSE shall demonstrate to the Transmission Provider that for the Month it has designated megawatts of Planning Resources that qualify pursuant to Section 69.2 to serve the LSE's Load in an amount equal to or greater than the Forecast LSE Requirement plus the PRM requirement established in Section 68 that is applicable to such LSE. LSEs shall submit updates to such Planning Resources no later than the first day of the Month preceding the Month.

### **69.1.3 Obtain Firm Transmission Service**

Each LSE shall document to the Transmission Provider that it has obtained sufficient Firm Point-To-Point Transmission Service for each Month adequate for its Load to be served, and that all Planning Resources designated for serving that Load meet the qualifications of this Module E.

### **69.1.4 Submit Resource Plans**

Each LSE shall submit to the Transmission Provider its Planning Resources, or revisions to previously submitted plans, for Planning Resources, as follows:

- 69.1.4.1** By March 1 of each year, each LSE shall submit to the Transmission Provider its Planning Resources for satisfying its RAR for the upcoming Planning Year.
- 69.1.4.2** Each LSE shall submit to the Transmission Provider a notice of any change in its Planning Resources or Forecast LSE Requirements no later than the first day of the Month preceding the Month in a Planning Year.
- 69.1.4.3** The Resource Plan of each LSE shall indicate the nature and current status of commitments with respect to each addition, retirement and sale or purchase of Planning Resources included in its Resource Plan. The Transmission Provider will review the adequacy of the submittals hereunder both as to timing and content.

- 69.1.4.4** At the LSE's request, the Transmission Provider will provide an LSE's Resource Plan to the LSE's RRO, state commission or to the Commission or NERC.

#### **69.1.5 Sustained Commitment**

Each LSE shall immediately notify the Transmission Provider of any revision to its Resource Plan and shall demonstrate continued adherence to the RAR standards. LSEs shall also remain committed to the required transmission capability to the extent required to ensure the deliverability of the Capacity Resources to meet the RAR.

### **69.2 Qualification of Planning Resources**

Planning Resources can be used to satisfy RAR requirements as follows:

#### **69.2.1 Designating Planning Resources**

Resources identified by LSEs as available to meet the reliability requirements determined by the Transmission Provider must comply with the requirements for designation of Planning Resources, as detailed in the Business Practices Manual for Resource Adequacy. Nothing herein shall infringe upon the requirement that LSEs comply with state reliability standards, safety standards, planning reserve margins, or be subject to the enforcement thereof.

##### **69.2.1.1 Single State or RRO Planning Resources**

If an LSE serves Load both in the Transmission Provider Region and outside the Transmission Provider Region within a single state or RRO region, then the LSE must designate Planning Resources to cover the appropriate PRM for the amount of Load in the Transmission Provider Region and for the amount of Load outside the Transmission Provider Region.

##### **69.2.1.2 Planning Resource Requirements**

- a.** An LSE may only designate a Planning Resource if such LSE possesses ownership or equivalent contractual rights that assure that each such Planning Resource

complies with all applicable requirements specified in this Module E. LSEs may satisfy this obligation for Planning Resources by fulfilling either of the following requirements:

- i. Designating a Capacity Resource or Load Modifying Resource registered with the Transmission Provider by the LSE; or
  - ii. Designating a Capacity Resource Load Modifying Resource registered with the Transmission Provider by another entity and providing proof, as required by the Transmission Provider, that the owner of the Capacity Resource or Load Modifying Resource accepts designation as a Planning Resource and the responsibility to comply with all applicable requirements of such designation.
- b. Capacity Resources must be deliverable to Load within the Transmission Provider Region. The deliverability of Capacity Resources to Network Load within the Transmission Provider Region shall be determined by System Impact Studies pursuant to this Tariff as conducted by the Transmission Provider that consider, among other factors, the deliverability of aggregate resources of Network Customers to the aggregate of Network Load. Capacity Resources may consist of Resources (Generation Resources or Demand

Response Resources) and/or External Resources.

- c. Generation Resources designated as Capacity Resources must submit generator availability data (including, but not limited to, NERC Generation Availability Data System) into a database provided by the Transmission Provider and as established in the Business Practices Manual for Resource Adequacy.
- d. Resources designated as Planning Resources must demonstrate capability on an annual basis as established in the Business Practices Manual for Resource Adequacy, commencing five (5) months before the Planning Year. Verification of Planning Resources also will be in accordance with the guidelines for Planning Resource verification by the applicable RRO, unless superceded by specific verification guidelines set by the applicable state authorities. Capacity Resources will be accredited at the Capacity Resource's Unforced Capacity rating utilizing the generator or demand availability data information and methods further described in the Business Practices Manual for Resource Adequacy.
- e. An LSE may designate a power purchase agreement as a Capacity Resource so long as the agreement provides for Firm Point-To-Point Transmission Service and meets the requirements set forth below.

A power purchase agreement that identifies a specific Generation Resource internal to the Transmission System as the source of supply shall be designated as an

on-system Capacity Resource. An LSE customer seeking to designate a power purchase agreement as an on-system Capacity Resource must provide to the Transmission Provider the information specified in Section 29.2(v) of the Tariff for on-system Network Resources.

Power purchase agreements that do not identify a specific Generation Resource from which power will be supplied, but rather allow for the power to be supplied from a range of potential Generation Resources may be designated as Capacity Resources only if the potential Generation Resources from which the power will be supplied are all external to the Transmission System. Such agreements shall be designated as off-system Capacity Resources. An LSE seeking to designate a power purchase agreement as an off-system Capacity Resource must provide to the Transmission Provider the information specified in Section 29.2(v) of the Tariff for off-system Network Resources.

Power purchase agreements that include liquidated damages provisions (“LD contracts”) may be designated as a Capacity Resource, either as an on-system Capacity Resource or an off-system Capacity Resource as applicable and consistent with subsections (ii) and (iii) above, only if any such agreement: 1) provides for Firm Point-To-Point Transmission Service, and; 2) the liquidated damages provisions included therein are of a “make whole” type, as described in the Business Practices Manual for Resource Adequacy.

**69.2.1.3      Designation of External Resources as Capacity Resources**

Resources that are external to the Transmission Provider Region may qualify as Capacity Resources, provided that the External Resources:

- a.      Comply with the contractual obligations of non-recall ability and proof of agreement with the asset owner on designation;
- b.      Have firm transmission service in the external system from the External Resource to the Transmission Provider border and such service has been evaluated by the Transmission Provider for deliverability to the LSE's Load within the Transmission Provider Region;
- c.      Do not cause existing deliverable resources within the Transmission Provider Region to become non-deliverable;
- d.      The capacity portion identified for delivery to the Transmission Provider Region has verification of capacity in the RRO in which the resource is located, and that the portion identified for delivery to Transmission Provider Region is shown to not be also assigned to a non-Transmission Provider load serving entity; and
- e.      External Resources designated as Capacity Resources must demonstrate capability on an annual basis as established in the Business Practices Manual for Resource Adequacy. Designated External Resources will be accredited at the



Unforced Capacity rating utilizing the generator availability data information and methods further described in the Business Practices Manual for Resource Adequacy.

- f. Nothing in this Module E imposes any new obligations on existing External Resources that have been accepted by the Transmission Provider and confirmed by Network Customers as designated Network Resources under the OASIS reservation process in place prior to the effective date of this Tariff.

#### **69.2.1.4 Determination of Resource Adequacy Requirements**

The Transmission Provider shall be responsible for determining whether LSEs have appropriately designated Capacity Resources that are deliverable to Load. Deliverability of Capacity Resources will be determined through the following processes:

- a. An analysis of aggregate deliverability will be performed through a System Impact Study for all candidate Capacity Resources that request Network Resource Interconnection Service under Attachment X to this Tariff. The deliverability study will include validation that a new candidate Capacity Resource can be dispatched along with all other Network Resources specified by Network Customers in the vicinity of the newly designated candidate Capacity Resource. Generation Resources that have Energy Resource Interconnection Service under Attachment X may become eligible to be a Capacity Resource for a specific LSE's Network Load

through a request for Firm Transmission Service made under Module B of this Tariff.

- b.** Generation Resources that have been interconnected to the system prior to Network Resource Interconnection Service being offered as an interconnection service under the Tariff, or that have been interconnected with Energy Resource Interconnection Service, may request the performance of a deliverability study by making a request for Network Resource Interconnection Service under Attachment X or Attachment R to the Tariff.
- c.** Existing Generation Resources, or portions thereof, that did not pass the Market Transition Deliverability Test may request evaluation of upgrades necessary to qualify the entire Generation Resource as aggregate deliverable by requesting *Network Resource Interconnection Service*. Such requests shall be made and shall be queued for evaluation under the procedures of Attachment X of this Tariff, as applicable.
- d.** Generation Resources that have been accepted by the Transmission Provider and confirmed by Network Customers as designated Network Resources under the OASIS reservation process in place prior to the effective date of this Tariff will be accepted by the Transmission Provider as deliverable to the Network Loads of the Network Customer for the term of the confirmed designation. Such Generation Resources must be evaluated for aggregate deliverability

and be certified deliverable in order to qualify as a Capacity Resource for the Network Customer for periods beyond the confirmed designation, or in order to qualify as a Capacity Resource for any other Network Customer.

- e. Absent deliverability pursuant to this Tariff, a Resource shall qualify as a Capacity Resource if the LSE has obtained Firm Transmission Service from the Resource to the LSE's Load and are subject to all other Capacity Resource requirements, including the must offer requirements of Section 69.2.3.

#### **69.2.2 Load Modifying Resources**

The following resources will be designated as Load Modifying Resources: Demand Resources and Behind-the-Meter Generation. Load Modifying Resources ("LMRs") can be utilized to meet RAR even if they do not qualify as a Network Resource, however all Load Modifying Resources utilized to meet RAR must be registered with the Transmission Provider in accordance with Section 69.1.4. All LMRs utilized to meet RAR must be available for use in the event of an Emergency as declared by the Transmission Provider, prior to the use of Operating Reserves to meet the energy balance, pursuant to the Emergency Operating Procedures of the Transmission Provider and in accordance with prohibitions and restrictions under state laws, rules, standards and permits.

Demand Resources and Behind-the-Meter Generation must be used to reduce the Forecast LSE Requirement in the RAR calculation, as specified by the Market Participant registering the Load Modifying Resource with the Transmission Provider in accordance with Section 69.1.4 of this Module E.

##### **69.2.2.1 Demand Resources**

The Transmission Provider shall develop procedures for accrediting, testing, validating, measuring, and verifying, all Demand Resources

claimed by a LSE as a Load Modifying Resource consistent with the procedures specified in the Business Practices Manual for Resource Adequacy. The accrediting, testing, validation, measurement and verification procedures developed by the Transmission Provider shall take into account any applicable state regulatory, RRO or other non-jurisdictional entities requirements regarding duration, frequency and notification processes for the candidate Demand Resources. The accrediting procedures shall also take into account deliverability and availability for the Planning Year as well as for any term longer than the Planning Year to meet the Load Forecast.

**a. Requirements for Demand Resources**

For any Demand Resource to qualify to receive capacity credit as a Load Modifying Resource, at the targeted MW level, the Demand Resource must meet all the requirements specified below. The targeted MW level is defined to be the MW level at which capacity credit is taken for any given month for a particular Demand Resource option. These requirements shall not become effective until three (3) months before the Planning Year.

- i. The Demand Resource must be equal to or greater than 100 kW (a grouping of smaller resources may qualify in meeting this standard).
- ii. The Demand Resource must be available to be scheduled for a load reduction at the targeted load reduction level with no more than 12 hours advisory notice.

- iii. Once Scheduling Instructions are given by the Transmission Provider that require a load reduction, the Demand Resource must be capable of ramping down to meet the targeted load reduction level by the Hour designated by the Transmission Provider's Scheduling Instructions.
- iv. Once the targeted level of Load reduction is achieved, the Demand Resource must be able to maintain the target level of Load reduction for at least four continuous hours.
- v. The Demand Resource must be capable of being interrupted at least five (5) times during the peak load season (when called upon by the Transmission Provider) during any Planning Year for which capacity credit is given.
- vi. Unless the Load associated with a Demand Resource that would normally be available for interruption is already off the Transmission System for external reasons such as maintenance outages, etc., when a Demand Resource Load reduction is requested by the Transmission Provider, the resultant Load reduction must be a reduction that would not have otherwise occurred within the next twenty-four (24) hour period. There should be no penalties assessed to a Market Participant using

Demand Resource as a capacity credit if the Demand Resource is unavailable for interruption due to its Load being off the Transmission System for external reasons, or in the event the targeted load reduction had already been accomplished for other reasons (*i.e.*, economic considerations or local reliability concerns).

- vi. Demand Resource in which curtailment is an economic option and is not an obligation during Emergency events declared by the Transmission Provider pursuant to the Transmission Provider Emergency Operating Procedures will not qualify as a Load Modifying Resource.
- viii. There can be only one Market Participant claiming the Demand Resource capacity credit associated with the Load reduction capability.
- ix. *Demand Resources offered into the Day-Ahead and/or Real-Time Energy Markets as price sensitive Bids are obligated to be interrupted during an Emergency pursuant to the Transmission Provider Emergency Operating Procedures regardless of the projected or actual Real-Time Energy Market LMP.*

**69.2.2.2 Behind-the-Meter Generation**

**a. Behind-the-Meter  
Generation Interconnected  
under Transmission  
Provider Procedures and  
Agreements**

The Transmission Provider shall develop procedures for commitment and dispatch of Behind-the-Meter Generation (“BTMG”) interconnected into the Transmission Provider Region under the Transmission Provider’s interconnection procedures and agreements that is designated by an LSE as a BTMG resource. Such procedures shall be consistent with the information provided by the LSE and at a minimum will provide for the commitment and dispatch of the generation, when available, during declared Emergencies prior to the use of Operating Reserves to meet the energy balance. The LSE shall notify the Transmission Provider when the status or availability of the unit changes, except for de minimus changes that do not need to be reported, according to procedures specified in the Business Practices Manual for Resource Adequacy. The Transmission Provider shall coordinate with LSEs that own or control such BTMG to commit and dispatch the units when necessary.

**b. Behind-the-Meter  
Generation Interconnected  
under State Regulatory  
Procedures and  
Agreements**

BTMG resources interconnected to the local distribution system consistent with state regulatory procedures and agreements may be claimed as a Load Modifying Resource by a LSE, but may not be committed for dispatch by the Transmission Provider during declared Emergencies where prohibited by state law and regulations. Where no state regulatory prohibitions exist, dispatch of such BTMG shall be consistent with the information provided by the LSE and at a minimum will provide for the commitment and dispatch of the generation, when available, during declared Emergencies. The Market Participant shall notify the Transmission Provider of the status and availability of the unit on a daily basis according to procedures specified in the Business Practices Manuals. The Transmission Provider shall coordinate with Market Participants that own or control such BTMG to commit and dispatch the units when necessary.



**69.2.2.3      Penalty Provisions for Load  
Modifying Resources**

Unless the LMR is unavailable as a result of maintenance requirements or for reasons of Force Majeure, the Market Participant representing the LSE which has received credit for the use of an LMR in meeting RAR requirements will be subject to the following penalties in the event the LMR is called upon during an Emergency as declared by the Transmission Provider and fails to respond, or does not respond at the targeted level of load reduction. The penalties defined below will only apply for the portion of the targeted level of load reduction that is not achieved during the Emergency declaration. There will not be a penalty assessed for any portion of the targeted load reduction which had already been accomplished for other reasons (*i.e.*, for economic considerations or local reliability concerns) at the time the request for interruption is made by the Transmission Provider. Likewise, for certain Demand Resources that are temperature dependant (*i.e.*, a Demand Resource program involving air conditioning load), the expected targeted level of load reduction may be adjusted in a manner defined in the measurement and verification procedures developed by the Transmission Provider to reflect the circumstances at the time Demand Resource is called upon to reduce load.

- a.**      The Transmission Provider shall assess the responsible Market Participant in Section 69.2.2.3 the costs that were otherwise incurred to replace the deficient resource at the time the LMR is called upon by the Transmission Provider and does not respond. The Transmission Provider shall allocate such revenues to the Market Participants representing the LSEs in the local Balancing Authority Area(s) that experienced the

Emergency on a load ratio share basis. For any situation where either an LMR does not respond to an interruption request, including those *circumstances where the resource is claimed to be unavailable as a result of maintenance requirements or for reasons of Force Majeure*, the Transmission Provider shall initiate an investigation with the Market Participant which has received credit for the use of an LMR into the cause of the resource not being available when called upon to reduce Load, and may, if deemed appropriate by the Transmission Provider, disqualify that resource from further utilization in meeting future RAR.

- b.** In the event the same LMR is unavailable on a second occasion (with at least a separation period of 24 hours) when called upon to reduce Load, except for a validated circumstance of maintenance requirements or for reasons of Force Majeure, that resource shall make the same penalty payment as indicated in section 69.2.2.3.a above, and will no longer be eligible for utilization by any Market Participant in meeting RAR requirements for the remainder of the current Planning Year and for the *next Planning Year*.

### **69.2.3 Planning Resource Must Offer Requirement**

Self-Schedules or Offers must be submitted for Capacity Resources consistent with requirements specified in the Business Practices Manual for Resource Adequacy, in the Day-Ahead Energy Market and all pre-Day Ahead and the first post Day-Ahead Reliability Assessment Commitment, except to the extent that the Capacity Resource is unavailable due to a full or partial forced or scheduled outage consistent with this Tariff. Self-Schedules or Offers must be submitted for Capacity Resources for each Hour during the Operating Month. Outages must be reported in the Transmission Provider's Outage Scheduler. Must offer requirements specified in the Business Practices Manual for Resource Adequacy will reflect resource operational limitations, including those related to fuel limited, energy output limited or Intermittent Resources and including all state regulations and laws relating to reliability, including but not limited to state reliability standards, safety standards, planning reserve margins, or the enforcement thereof. Load Modifying Resources are subject to a must-offer requirement during an Emergency as declared by the Transmission Provider Emergency Operating Procedures as specified in Section 69.2.2. Such Emergency must offer requirements specified in the Resource Adequacy Business Practices Manual will reflect Load Modifying Resource operational limitations, including those related to fuel limited, energy output limited and including all state regulations and laws relating to reliability, including but not limited to state reliability standards, safety standards, planning reserve margins, or the enforcement thereof.

Operating Reserve, consistent with the terms of Module C, will be deemed to have satisfied the requirement to Self-Schedule or Offer in the Day-Ahead Energy Market. At its sole discretion, the Transmission Provider may curtail Exports sourced at a Capacity Resource during a declared Emergency. Procedures for such curtailments shall be specified in the Business Practices Manuals. The Transmission Provider may not curtail Generation Resources that deliver energy outside of the Transmission Provider Region and that properly respond to reserve activation in accordance with the terms and conditions of a Regional Reserve Sharing Agreement during the time such reserve activation is effective and when these resources are not Capacity Resources.

### **69.3 Reports**

#### **69.3.1 State RAR Standards**

The Transmission Provider will assist states in meeting any of state RAR standards by providing relevant Resource Plan information as available and as may be requested by States, subject to the data confidentiality provisions of the EMT in Section 38.9. Nothing in this Module E shall prohibit any state from requesting data relating to state reliability standards, safety standards, planning reserve margins, or the enforcement thereof.

#### **69.3.2 Notification of RAR Status**

The Transmission Provider will maintain data bases and will report to states upon request the extent to which each LSE has met or has not met the requirements in Section 69.1 during relevant time periods.

#### **69.3.3 Facilitation of a Voluntary Capacity Exchange**

The Transmission Provider shall maintain and enhance an electronic bulletin board platform that may be used by Market Participants to facilitate the ability of Market Participants that have excess Capacity Resources to confidentially enter into voluntary bilateral transactions with LSEs that have the need for Capacity Resources. The prices and quantities of such confidential transactions, but not the names of the parties or the Capacity Resources, will be made public four (4) months after the fact to facilitate Capacity Resource price transparency. The development of the electronic bulletin board platform will occur through the Transmission Provider's stakeholder process and the characteristics of the platform will be specified in the Business Practices Manual for Resource Adequacy.

#### **69.3.4 After the Fact Load and Planning Resource Assessment**

On a monthly basis, the Transmission Provider shall review data for the prior Month for an LSE to evaluate the accuracy of the Forecast LSE Requirements submitted by each LSE for such month. If during a Planning Year the Transmission Provider determines, that the Forecast LSE Requirements under-forecasts the Load, after accounting for any extreme weather conditions during such month, the Transmission Provider will notify the LSE of the deficiency and request a written response detailing the reasons for the deficiency. If the deficiency, after weather normalization, is statistically significant with respect to an LSE's Forecast LSE Requirement, either for three (3) consecutive months or for one (1) month between June and September, then the Transmission Provider will address the uncertainty caused by the LSE's deficient hourly Forecast LSE Requirements by: (i) informing applicable State authorities; and (ii) on the Transmission Provider's website, publishing for ninety (90) days the identity of such LSE and the period(s) of the deficiency.

On a monthly basis, the Transmission Provider shall review data to evaluate the accuracy of the Resources Plan submitted by LSEs to ascertain whether such Planning Resources were in fact available and able to serve Load. If the Planning Resources identified by an LSE are insufficient to meet the Forecast LSE Requirements plus PRM and the deficiency is statistically significant either for three (3) consecutive months or for one (1) month between June and September, then the Transmission Provider will address the insufficiency by: (i) informing applicable State authorities; and (ii) on the Transmission Provider's website, publishing for ninety (90) days the identity of the such LSE and the period(s) of the deficiency.

DRAFT – DECEMBER 18, 2007