Countries in the Central & Eastern Europe (CEE) region (including Turkey) are leaders for their smart grid and smart metering potential among emerging market nations. By 2025, eight of the 12 main countries in this study (all except for Croatia, Czech Republic, Lithuania, and Turkey) will have completed smart meter deployments and many will have deployed other advanced smart grid infrastructure such as distribution automation, wide area measurement, distributed renewable sources of generation, and electric vehicle charging infrastructure. Overall, the smart grid market represents $25.2 billion of investment over the next ten years.

Volume II of this study covers twelve CEE countries in depth, as well as summaries for six additional countries. It includes the eleven countries in Central & Eastern Europe that are now part of the European Union but until the early 1990s were Communist states, as well as Turkey, Albania, and the remaining former Yugoslav countries. These countries have all undergone radical industry restructurings over the past two decades, and in some cases are still in the process of full liberalization. In most countries, the state still plays a role in one or more segments of the electricity industry. Overall power infrastructure is in many cases outdated and not compatible with a fully integrated European power market. The CEE electricity market is therefore undergoing changes, which present utilities with opportunities to invest in smart grid infrastructure in the process of upgrading their grids.

Most of these countries also must meet EU regulations (while many non-EU countries are looking to follow similar guidelines). More specifically, EU Directive 2009/72/EC requires that all EU states conduct a cost-benefit analysis (CBA) for smart metering and that, when the result is positive, countries deploy smart meters to 80% of households and businesses.
by 2020. Almost all Western European countries have found—or are expected to find—net positive benefits from smart metering, and must meet the EU target. The case is less clear in the CEE region, and many countries have yet to say if they will aim for this target. So far, the results of CBAs have been mixed in the CEE region, with three countries finding positive results, four finding negative results, and three yet to announce. The EU is encouraging countries with negative CBAs to re-assess their smart meter potential in the next 2-3 years as costs come down and underlying conditions improve. Therefore, it is still likely that most CEE countries will begin large-scale deployments in the next few years.

Beyond regulations, the CEE region’s core market conditions support smart meter deployments. Per-capita consumption is higher than in most other emerging markets. Consumption may be lower than in Western Europe, but is growing faster. Meanwhile, the CEE region is closer and more exposed to Russia, and recent aggressiveness from Russia has increased the importance of energy independence in the region. Finally, transmission and distribution (T&D) losses and power outages are a much larger concern in the CEE region than in Western Europe. In some CEE countries, utilities can justify smart meter deployments through immediate loss-reduction benefits, with other benefits an added bonus.

The CEE region also benefits from knowledge spillovers from Western Europe. Many utilities in CEE are owned by French, German, and Italian utilities that already have experience in deploying smart grid infrastructure. Almost all of the major smart grid vendors already have a presence in CEE countries, giving them a better grasp of regulatory conditions. EU-based vendors in particular face few barriers due to the common market. Additionally, many local vendors are already active across the region, which will help to drive new market segments.

Most CEE countries have not yet transposed EU smart metering regulations into national law or accepted the EU smart meter mandate. Until they do, some uncertainty will remain in the market. The EU’s ongoing financial crisis casts some further doubt on new investments. Only five of the countries covered in this report are part of the euro currency, but all are susceptible to further financial market volatility. But overall, CEE countries have conditions that support smart grid, willing stakeholders, and well-developed pilot projects—including large-scale rollouts in some cases. The CEE smart grid market is well positioned for significant near-term growth.

Key questions answered in this study:

- Which CEE countries will follow EU regulations for smart grid deployments?
- How large will the smart grid market be in 18 countries across 14 sub-segments?
- How will smart grid projects be financed in EU and non-EU countries?
- Which local vendors are active and who are they partnering with?
# Table of Contents

i. Executive summary 1  
i.i What’s new in 2015? 5  
ii. Methodology 26  

1. Introduction 30  
  1.1 What is smart grid? 30  
  1.2 Smart grid’s role in regional interconnection 41  
  1.3 How has smart grid been used elsewhere in the world? 43  

2. Central and Eastern Europe smart grid snapshot 51  
  2.1 The region in comparison 53  
  2.2 Regional drivers 55  
  2.3 Regional challenges 63  

3. Regional market forecast 68  

4. Poland 77  
  4.1 Electricity industry structure 79  
  4.2 Smart metering regulatory environment 81  
  4.3 Market forecast 85  
  4.4 Utility activity 89  

5. Romania 92  
  5.1 Electricity industry structure 94  
  5.2 Smart metering regulatory environment 95  
  5.3 Market forecast 98  
  5.4 Utility activity 101  

6. Turkey 104  
  6.1 Electricity industry structure 106  
  6.2 Smart metering regulatory environment 108  
  6.3 Market forecast 110  
  6.4 Utility activity 113  

7. Estonia 116  
  7.1 Electricity industry structure 118  
  7.2 Smart metering regulatory environment 120
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3 Market forecast</td>
<td>123</td>
</tr>
<tr>
<td>7.4 Utility activity</td>
<td>126</td>
</tr>
<tr>
<td><strong>8. Slovenia</strong></td>
<td><strong>128</strong></td>
</tr>
<tr>
<td>8.1 Electricity industry structure</td>
<td>130</td>
</tr>
<tr>
<td>8.2 Smart metering regulatory environment</td>
<td>131</td>
</tr>
<tr>
<td>8.3 Market forecast</td>
<td>134</td>
</tr>
<tr>
<td>8.4 Utility activity</td>
<td>137</td>
</tr>
<tr>
<td><strong>9. Hungary</strong></td>
<td><strong>139</strong></td>
</tr>
<tr>
<td>9.1 Electricity industry structure</td>
<td>141</td>
</tr>
<tr>
<td>9.2 Smart metering regulatory environment</td>
<td>143</td>
</tr>
<tr>
<td>9.3 Market forecast</td>
<td>145</td>
</tr>
<tr>
<td>9.4 Utility activity</td>
<td>147</td>
</tr>
<tr>
<td><strong>10. Bulgaria</strong></td>
<td><strong>151</strong></td>
</tr>
<tr>
<td>10.1 Electricity industry structure</td>
<td>153</td>
</tr>
<tr>
<td>10.2 Smart metering regulatory environment</td>
<td>154</td>
</tr>
<tr>
<td>10.3 Market forecast</td>
<td>156</td>
</tr>
<tr>
<td>10.4 Utility activity</td>
<td>159</td>
</tr>
<tr>
<td><strong>11. Czech Republic</strong></td>
<td><strong>161</strong></td>
</tr>
<tr>
<td>11.1 Electricity industry structure</td>
<td>163</td>
</tr>
<tr>
<td>11.2 Smart metering regulatory environment</td>
<td>164</td>
</tr>
<tr>
<td>11.3 Market forecast</td>
<td>166</td>
</tr>
<tr>
<td>11.4 Utility activity</td>
<td>169</td>
</tr>
<tr>
<td><strong>12. Slovakia</strong></td>
<td><strong>172</strong></td>
</tr>
<tr>
<td>12.1 Electricity industry structure</td>
<td>176</td>
</tr>
<tr>
<td>12.2 Smart metering regulatory environment</td>
<td>178</td>
</tr>
<tr>
<td>12.3 Market forecast</td>
<td>181</td>
</tr>
<tr>
<td><strong>13. Latvia</strong></td>
<td><strong>182</strong></td>
</tr>
<tr>
<td>13.1 Electricity industry structure</td>
<td>184</td>
</tr>
<tr>
<td>13.2 Smart metering regulatory environment</td>
<td>185</td>
</tr>
<tr>
<td>13.3 Market forecast</td>
<td>187</td>
</tr>
</tbody>
</table>
## List of Figures, Boxes, and Tables

<table>
<thead>
<tr>
<th>Figure/Table Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central &amp; Eastern Europe smart grid: key takeaways</td>
<td>2</td>
</tr>
<tr>
<td>Changes in CEE smart meter potential</td>
<td>5</td>
</tr>
<tr>
<td>CEE compliance with EU smart meter mandates</td>
<td>6</td>
</tr>
<tr>
<td>Smart grid regulatory advancements in CEE 2013 – 2015</td>
<td>8</td>
</tr>
<tr>
<td>Recent smart grid projects in CEE</td>
<td>9</td>
</tr>
<tr>
<td>Major smart grid projects in CEE 2013 – 2015</td>
<td>10</td>
</tr>
<tr>
<td>Additional ongoing smart grid projects in CEE (chart)</td>
<td>11</td>
</tr>
<tr>
<td>Additional ongoing smart grid projects in CEE (table)</td>
<td>12</td>
</tr>
<tr>
<td>EU smart grid-related regulations</td>
<td>19</td>
</tr>
<tr>
<td>20-20-20 targets for CEE countries</td>
<td>19</td>
</tr>
<tr>
<td>Smart grid drivers and barriers in CEE</td>
<td>20</td>
</tr>
<tr>
<td>Theft and reliability problems in CEE</td>
<td>21</td>
</tr>
<tr>
<td>Renewable energy in CEE</td>
<td>21</td>
</tr>
<tr>
<td>Available completed CBAs in CEE</td>
<td>22</td>
</tr>
<tr>
<td>Already announced large-scale smart meter rollouts in CEE (table)</td>
<td>23</td>
</tr>
<tr>
<td>Already announced large-scale smart meter rollouts in CEE (chart)</td>
<td>23</td>
</tr>
<tr>
<td>Leading smart grid vendors in CEE</td>
<td>24</td>
</tr>
<tr>
<td>CEE smart meter penetration rate</td>
<td>24</td>
</tr>
<tr>
<td>Smart grid forecast by country</td>
<td>25</td>
</tr>
<tr>
<td>Smart grid forecast data by country</td>
<td>25</td>
</tr>
<tr>
<td>Northeast Group smart grid forecasting model</td>
<td>29</td>
</tr>
<tr>
<td>Figure 1.1: Smart grid value chain</td>
<td>30</td>
</tr>
<tr>
<td>Figure 1.2: Smart grid model highlighting focus in CEE</td>
<td>31</td>
</tr>
<tr>
<td>Table 1.1: Benefits of AMI in CEE</td>
<td>34</td>
</tr>
<tr>
<td>Table 1.2: Electric vehicle subsidies in CEE</td>
<td>36</td>
</tr>
<tr>
<td>Table 1.3: Demand response options</td>
<td>37</td>
</tr>
<tr>
<td>Figure 1.3: Transmission interconnections in CEE</td>
<td>42</td>
</tr>
<tr>
<td>Figure 1.4: Global smart grid activity</td>
<td>44</td>
</tr>
<tr>
<td>Figure 1.5: Cumulative AMI investment by region up to 2015</td>
<td>45</td>
</tr>
<tr>
<td>Figure 1.6: Cumulative DA investment by region up to 2015</td>
<td>45</td>
</tr>
<tr>
<td>Figure 1.7: Cumulative AMI investment by region from 2015 – 2025</td>
<td>46</td>
</tr>
<tr>
<td>Figure 1.8: Cumulative DA investment by region from 2015 – 2025</td>
<td>46</td>
</tr>
<tr>
<td>Figure 2.1: Emerging markets smart meter potential</td>
<td>51</td>
</tr>
</tbody>
</table>
## List of Figures, Boxes, and Tables (cont.)

<table>
<thead>
<tr>
<th>Figure/Box/Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 2.2</td>
<td>Per-capita electricity consumption</td>
<td>54</td>
</tr>
<tr>
<td>Figure 2.3</td>
<td>Per-capita CO\textsubscript{2} emissions</td>
<td>54</td>
</tr>
<tr>
<td>Figure 2.4</td>
<td>Projected GDP growth (2015 – 2019)</td>
<td>55</td>
</tr>
<tr>
<td>Box 2.1</td>
<td>EU Directive 2009/72/EC</td>
<td>56</td>
</tr>
<tr>
<td>Figure 2.5</td>
<td>CEE compliance with EU smart meter mandates</td>
<td>57</td>
</tr>
<tr>
<td>Table 2.1</td>
<td>European Commission recommendations for smart meter requirements</td>
<td>58</td>
</tr>
<tr>
<td>Figure 2.6</td>
<td>Electricity prices in emerging markets</td>
<td>59</td>
</tr>
<tr>
<td>Figure 2.7</td>
<td>Electricity prices in Europe</td>
<td>60</td>
</tr>
<tr>
<td>Table 2.2</td>
<td>20-20-20 targets for CEE countries</td>
<td>61</td>
</tr>
<tr>
<td>Figure 2.8</td>
<td>Renewable sources of energy in CEE</td>
<td>61</td>
</tr>
<tr>
<td>Figure 2.9</td>
<td>Renewable energy promotion instruments in CEE</td>
<td>62</td>
</tr>
<tr>
<td>Figure 2.10</td>
<td>Distribution losses in CEE</td>
<td>62</td>
</tr>
<tr>
<td>Table 2.3</td>
<td>Smart grid market drivers and barriers in CEE</td>
<td>64</td>
</tr>
<tr>
<td>Figure 2.11</td>
<td>Average annual GDP growth in CEE</td>
<td>66</td>
</tr>
<tr>
<td>Figure 3.1</td>
<td>CEE AMI penetration rate</td>
<td>68</td>
</tr>
<tr>
<td>Figure 3.2</td>
<td>CEE cumulative smart grid forecast by country</td>
<td>69</td>
</tr>
<tr>
<td>Table 3.1</td>
<td>CEE cumulative smart grid forecast data by country</td>
<td>69</td>
</tr>
<tr>
<td>Figure 3.3</td>
<td>CEE cumulative smart grid forecast</td>
<td>70</td>
</tr>
<tr>
<td>Table 3.2</td>
<td>CEE cumulative smart grid forecast data</td>
<td>70</td>
</tr>
<tr>
<td>Figure 3.4</td>
<td>Annual AMI deployments in CEE</td>
<td>71</td>
</tr>
<tr>
<td>Figure 3.5</td>
<td>AMI cost breakdown</td>
<td>72</td>
</tr>
<tr>
<td>Figure 3.6</td>
<td>Per-endpoint smart meter cost estimates</td>
<td>72</td>
</tr>
<tr>
<td>Figure 3.7</td>
<td>AMI forecast by segment</td>
<td>73</td>
</tr>
<tr>
<td>Table 3.3</td>
<td>AMI forecast data by segment</td>
<td>73</td>
</tr>
<tr>
<td>Figure 3.8</td>
<td>DA forecast by segment</td>
<td>74</td>
</tr>
<tr>
<td>Table 3.4</td>
<td>DA forecast data by segment</td>
<td>74</td>
</tr>
<tr>
<td>Figure 3.9</td>
<td>HEM forecast by segment</td>
<td>75</td>
</tr>
<tr>
<td>Table 3.5</td>
<td>HEM forecast data by segment</td>
<td>75</td>
</tr>
<tr>
<td>Figure 3.10</td>
<td>IT forecast by segment</td>
<td>76</td>
</tr>
<tr>
<td>Table 3.6</td>
<td>IT forecast data by segment</td>
<td>76</td>
</tr>
<tr>
<td>Table 4.1</td>
<td>Poland key data</td>
<td>77</td>
</tr>
<tr>
<td>Figure 4.1</td>
<td>Poland AMI penetration rate</td>
<td>77</td>
</tr>
<tr>
<td>Table 4.2</td>
<td>Smart grid indicators in Poland</td>
<td>78</td>
</tr>
<tr>
<td>Figure 4.2</td>
<td>New and decommissioned generation in Poland</td>
<td>79</td>
</tr>
</tbody>
</table>
List of Figures, Boxes, and Tables (cont.)

Table 4.3: Poland’s smart grid roadmap 82
Box 4.1: Political risk in Poland 83
Figure 4.3: Poland smart grid forecast 72
Table 4.4: Poland smart grid forecast data 72
Figure 4.4: Poland AMI forecast 73
Table 4.5: Poland AMI forecast data 73
Table 4.6: Smart meter deployments at Polish utilities 89
Table 4.7: Additional smart grid projects in Poland 91
Table 5.1: Romania key data 92
Figure 5.1: Romania AMI penetration rate 92
Table 5.2: Smart grid indicators in Romania 93
Box 5.1: Political risk in Romania 96
Table 5.3: Romania’s expected smart meter deployment investments 97
Figure 5.2: CAIDI in select CEE countries 98
Table 5.4: Romania smart grid forecast data 99
Figure 5.3: Romania smart grid forecast 99
Table 5.5: Romania AMI forecast data 100
Figure 5.4: Romania AMI forecast 100
Figure 5.5: Projected Enel AMI deployments in Romania 101
Table 5.6: Additional smart grid projects in Romania 103
Table 6.1: Turkey key data 104
Figure 6.1: Turkey AMI penetration rate 104
Table 6.2: Smart grid indicators in Turkey 105
Figure 6.2: % losses by utility in Turkey 107
Table 6.3: Distribution utilities in Turkey 107
Figure 6.3: Locations of distribution utilities in Turkey 108
Box 6.1: Political risk in Turkey 109
Figure 6.3: Turkey smart grid forecast 111
Table 6.4: Turkey smart grid forecast data 111
Figure 6.4: Turkey AMI forecast 112
Table 6.5: Turkey AMI forecast data 112
Figure 6.5: Smart grid activity in Turkey 114
Table 6.6: Additional smart grid projects in Turkey 114
Table 7.1: Estonia key data 116
List of Figures, Boxes, and Tables (cont.)

- Figure 7.1: Estonia AMI penetration rate
- Table 7.2: Smart grid indicators in Estonia
- Box 7.1: Political risk in Estonia
- Figure 7.2: Estonia’s E-Mobility operating model
- Figure 7.3: Estonia smart grid forecast
- Table 7.3: Estonia smart grid forecast data
- Figure 7.4: Estonia AMI forecast
- Table 7.4: Estonia AMI forecast data
- Table 7.5: Additional smart grid projects in Estonia
- Table 8.1: Slovenia key data
- Figure 8.1: Slovenia AMI penetration rate
- Table 8.2: Smart grid indicators in Slovenia
- Box 8.1: Political risk in Slovenia
- Figure 8.2: Estimated monthly household power bills in CEE
- Figure 8.3: Slovenia smart grid forecast
- Table 8.3: Slovenia smart grid forecast data
- Figure 8.4: Slovenia AMI forecast
- Table 8.3: Slovenia AMI forecast data
- Table 8.4: Smart grid priorities in Slovenia
- Table 8.5: Additional smart grid projects in Slovenia
- Table 9.1: Hungary key data
- Figure 9.1: Hungary AMI penetration rate
- Table 9.2: Smart grid indicators in Hungary
- Box 9.1: Political risk in Hungary
- Figure 9.2: Hungary’s 2011 smart grid roadmap
- Table 9.3: Regulations that need to modified for smart metering in Hungary
- Figure 9.3: Public support for smart metering in Hungary (2013)
- Table 9.4: Hungary smart grid forecast data
- Figure 9.4: Hungary smart grid forecast
- Table 9.5: Hungary AMI forecast data
- Figure 9.5: Hungary AMI forecast
- Table 9.6: Additional smart grid projects in Hungary
- Table 10.1: Bulgaria key data
- Figure 10.1: Bulgaria AMI penetration rate
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 10.2</td>
<td>Smart grid indicators in Bulgaria</td>
<td>152</td>
</tr>
<tr>
<td>Box 10.1</td>
<td>Political risk in Bulgaria</td>
<td>155</td>
</tr>
<tr>
<td>Table 10.3</td>
<td>Ease of business rankings</td>
<td>156</td>
</tr>
<tr>
<td>Figure 10.2</td>
<td>Bulgaria smart grid forecast</td>
<td>157</td>
</tr>
<tr>
<td>Table 10.4</td>
<td>Bulgaria smart grid forecast data</td>
<td>157</td>
</tr>
<tr>
<td>Figure 10.3</td>
<td>Bulgaria AMI forecast</td>
<td>158</td>
</tr>
<tr>
<td>Table 10.5</td>
<td>Bulgaria AMI forecast data</td>
<td>158</td>
</tr>
<tr>
<td>Table 10.6</td>
<td>Additional smart grid projects in Bulgaria</td>
<td>160</td>
</tr>
<tr>
<td>Table 11.1</td>
<td>Czech Republic key data</td>
<td>161</td>
</tr>
<tr>
<td>Figure 11.1</td>
<td>Czech Republic AMI penetration rate</td>
<td>161</td>
</tr>
<tr>
<td>Table 11.2</td>
<td>Smart grid indicators in Czech Republic</td>
<td>162</td>
</tr>
<tr>
<td>Box 11.1</td>
<td>Political risk in Czech Republic</td>
<td>165</td>
</tr>
<tr>
<td>Figure 11.2</td>
<td>Planned renewable energy development in Czech Republic</td>
<td>166</td>
</tr>
<tr>
<td>Table 11.3</td>
<td>Czech Republic smart grid forecast data</td>
<td>167</td>
</tr>
<tr>
<td>Figure 11.3</td>
<td>Czech Republic smart grid forecast</td>
<td>167</td>
</tr>
<tr>
<td>Table 11.4</td>
<td>Czech Republic AMI forecast data</td>
<td>168</td>
</tr>
<tr>
<td>Figure 11.4</td>
<td>Czech Republic AMI forecast</td>
<td>168</td>
</tr>
<tr>
<td>Table 11.5</td>
<td>Additional smart grid projects in Czech Republic</td>
<td>171</td>
</tr>
<tr>
<td>Table 12.1</td>
<td>Slovakia key data</td>
<td>172</td>
</tr>
<tr>
<td>Figure 12.1</td>
<td>Slovakia AMI penetration rate</td>
<td>172</td>
</tr>
<tr>
<td>Table 12.2</td>
<td>Smart grid indicators in Slovakia</td>
<td>173</td>
</tr>
<tr>
<td>Box 12.1</td>
<td>Political risk in Slovakia</td>
<td>177</td>
</tr>
<tr>
<td>Figure 12.3</td>
<td>Slovakia smart grid forecast</td>
<td>179</td>
</tr>
<tr>
<td>Table 12.4</td>
<td>Slovakia smart grid forecast data</td>
<td>179</td>
</tr>
<tr>
<td>Figure 12.4</td>
<td>Slovakia AMI forecast</td>
<td>180</td>
</tr>
<tr>
<td>Table 12.5</td>
<td>Slovakia AMI forecast data</td>
<td>180</td>
</tr>
<tr>
<td>Table 12.6</td>
<td>Additional smart grid projects in Slovakia</td>
<td>181</td>
</tr>
<tr>
<td>Table 13.1</td>
<td>Latvia key data</td>
<td>182</td>
</tr>
<tr>
<td>Figure 13.1</td>
<td>Latvia AMI penetration rate</td>
<td>182</td>
</tr>
<tr>
<td>Table 13.2</td>
<td>Smart grid indicators in Latvia</td>
<td>183</td>
</tr>
<tr>
<td>Box 13.1</td>
<td>Political risk in Latvia</td>
<td>186</td>
</tr>
<tr>
<td>Figure 13.2</td>
<td>Latvia smart grid forecast</td>
<td>188</td>
</tr>
<tr>
<td>Table 13.3</td>
<td>Latvia smart grid forecast data</td>
<td>188</td>
</tr>
<tr>
<td>Figure 13.3</td>
<td>Latvia AMI forecast</td>
<td>189</td>
</tr>
</tbody>
</table>
List of Figures, Boxes, and Tables (cont.)

Table 13.4: Latvia AMI forecast data 189
Table 13.5: Additional smart grid projects in Latvia 190
Table 14.1: Croatia key data 191
Figure 14.1: Croatia AMI penetration rate 191
Table 14.2: Smart grid indicators in Croatia 192
Box 14.1: Political risk in Croatia 194
Figure 14.2: Croatia smart grid forecast 196
Table 14.3: Croatia smart grid forecast data 196
Figure 14.3: Croatia AMI forecast 197
Table 14.4: Croatia AMI forecast data 197
Table 14.5: Additional smart grid projects in Croatia 198
Table 15.1: Lithuania key data 200
Figure 15.1: Lithuania AMI penetration rate 200
Table 15.2: Smart grid indicators in Lithuania 201
Box 15.1: Political risk in Lithuania 204
Table 15.3: Lithuania smart grid forecast data 206
Figure 15.2: Lithuania smart grid forecast 206
Table 15.4: Lithuania AMI forecast data 207
Figure 15.3: Lithuania AMI forecast 207
Table 15.6: Additional smart grid projects in Lithuania 208
Table 16.1: Key data for other CEE countries 209
Table 16.2: EBRD smart grid loans to former Yugoslav countries 210
Table 16.3: Other CEE smart grid forecast data 212
Figure 16.1: Other CEE smart grid forecast 212
Table 16.4: Other CEE AMI forecast data 213
Figure 16.2: Other CEE AMI forecast 213
Table 16.5: Additional smart grid projects in other CEE countries 214
Figure 17.1: Leading smart grid vendors in CEE 216
Table 17.1: Other leading smart grid vendors in CEE 224

Appendices:

Wind and solar feed-in tariffs and premiums in CEE 237
Solar and wind primary production in CEE 238
Electric vehicle data in Central & Eastern Europe 239
Cost comparison in Hungary, Romania, and Slovakia CBAs 240
<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples of quantifying smart meter benefits in Slovakia</td>
<td>240</td>
</tr>
<tr>
<td>Sensitivity analysis for smart metering cost-benefit analyses</td>
<td>240</td>
</tr>
<tr>
<td>NPV in Hungary, Romania, and Slovakia</td>
<td>241</td>
</tr>
<tr>
<td>Cumulative savings from smart meter deployments</td>
<td>241</td>
</tr>
</tbody>
</table>
Order Form – Central & Eastern Europe and Turkey Smart Grid: Market Forecast

Pricing

Single user – $3,750 | Enterprise license – $5,400

Clients purchasing a single user license are limited to one user for this report. The enterprise license allows all employees within a single organization to view the report. Any forwarding or sharing of the report to others who have not paid for it is strictly forbidden.

Email orders: Fill out and scan the sheet below. Please email orders to ben.gardner@northeast-group.com

Telephone: We can be reached at +1.202.538.0848. Please have all of the information below ready to expedite your order.

Customer information

<table>
<thead>
<tr>
<th>NAME</th>
<th>POSITION</th>
<th>COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CITY</th>
<th>STATE</th>
<th>POSTAL CODE</th>
<th>COUNTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TELEPHONE</th>
<th>EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Credit card information

Card type:

- □ VISA
- □ MASTERCARD
- □ AMERICAN EXPRESS
- □ DISCOVER

<table>
<thead>
<tr>
<th>CARD NUMBER</th>
<th>EXPIRATION DATE</th>
<th>CV CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CARDHOLDER’S NAME</th>
<th>SIGNATURE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BILLING ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CITY</th>
<th>STATE</th>
<th>POSTAL CODE</th>
<th>COUNTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

By purchasing this report I agree to abide by the following terms and conditions: 1. Single-user license - use of this report is restricted to one individual. 2. Enterprise license – use of this report is restricted to individuals within a single enterprise or organization. I agree not to forward or share this report to others who have not paid for its use.