1.1 INTRODUCTION

To make the economy efficient and competitive, it is necessary for India to revitalize its infrastructure. Infrastructure development can be done when an economy is financially vibrant and viable. Restructuring is usually advocated for streamlining country’s economic policies with respect to investment and expenditure, ownership and environment. Because of its requirement and acceptance to all communities in the country, infrastructure development becomes very essential. Keeping this into consideration, economic reforms were initiated in July 1991 in the trade sector. But for development of entire economy, power and energy plays vital role. It gives strength to entire economy provided it is blessed with sufficient availability of resources. Adequate availability of power has always been a challenge since independence. From 1900 to 1948 localized private electricity supply companies used to supply electricity in urban centers only. After independence state electricity boards (SEBs) were promoted. These boards were vertically integrated and had overall responsibility of generation, transmission and distribution of electricity in different states of India. Rural electrification was also done in subsequent years to spread this network all over the country. Central government also started to participate in generation, transmission and power grid management.

Indian Government started power sector reforms in the country in early 1990s. The National Development Council (NDC) in association with multilateral funding agencies like World Bank and Asian Development Bank prepared an agenda for power sector reforms in India in 1994. These recommendations advocated unbundling of state electricity boards (SEBs) into separate entities with regard to generation, transmission and distribution. The succeeding reforms focused on the privatization of electricity sector and creation of independent regulatory board at central and regional levels.

1.2 BACKGROUND OF HARYANA

Haryana was curved out on the Punjab state on November 1, 1966 on the basis of Hindi-speaking areas of the state Punjab. The state of Haryana was founded on the recommendation of “Sardar Hukam Singh Parliamentary Committee”. This committee
was announced in the Parliament of India on September 23, 1965. As per the recommendations of “Sardar Hukam Singh Committee”, “Shah Commission” was set up on April 23, 1966 with Justice J. C. Shah as Chairperson to bifurcate and finalised the borders of Punjab and Haryana states. The commission submitted its report on May 31, 1966. On the basis of this report, districts Hisar, Mahendergarh, Gurgaon, Rohtak, and Karnal were finalized as the part of the new state Haryana. In addition to this, the Tehsils of Jind, Narwana, Naraingarh, Ambala and Jagadhri were also considered for inclusion. The commission recommended that Tehsil Kharar must be a part of Haryana. Chandigarh city of Ambala was made a union territory (UT), to act as capital of both the states-Punjab and Haryana. Chandigarh was to transfer to state of Punjab in 1986, as per the Rajiv-Longowal recommendations, but the transfer was not done, pending on an agreement in which parts of the the Hindi speaking areas of Abohar and Fazilka, part of Firozpur District of Punjab that should be transferred to Haryana in replacement.¹ Haryana is now a leading contributor of food grain and milk in the country. Agriculture is the leading occupation for the residents in the state of Haryana. Haryana contributed in a long way during 1960s to the Green Revolution that made India self-dependent in production of food.

Haryana is one of the more affluent states of India. Its per capita income is second highest in the country at INR138, 859 in the year 2011–12 and INR 128,341 in the year 2012–13.² Haryana is also one of the most economically enhanced regions in South Asia and its agricultural and manufacturing industry experienced unremitting growth since 1970s. Haryana is India's largest manufacturer of passenger cars, two-wheelers, and tractors.³ Since 2000, the state has also appeared as the largest recipient of investment per capita in India.⁴ The city of Gurgaon rapidly emerged as a major focal point for the information technology and automobile industries on national level. Gurgaon is home of Maruti Suzuki, India's largest automobile manufacturer, and Hero Moto Corp, the world's largest

² This information is retrieved from http://articles.timesofindia.indiatimes.com/2012-08-14/india-business/33200754_1_capita-income-capita-expenditure-haryana on September 14, 2012.
³ This information is retrieved from http://shodhganga.inflibnet.ac.in/bitstream/10603/4405/9/09_chapter%202.pdf on December 8, 2010
two-wheelers manufacturer. Sonipat, Yamuna Nagar, Panipat, Panchkula and Faridabad are also industrial centers of the nation, with the Panipat Refinery being the second in South Asia.⁵ There are also well established steel, plywood, paper and textile industries in the state.⁶ At present, there are twenty one districts named Ambala, Bhiwani, Faridabad, Fatehabad, Gurgaon, Hisar, Jhajjar, Jind, Kaithal, Karnal, Kurukshetra, Mahendragarh, Mewat, Palwal, Panchkula, Panipat, Rewari, Rohtak, Sirsa, Sonipat, Yamuna Nagar in the state of Haryana.⁷

1.1 Map of Haryana⁸

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⁵ This information is retrieved from http://en.wikipedia.org/wiki/Haryana on May 11, 2012.
⁶ This information is retrieved from http://ww2.haryanatourist.com/?folio=7POYGN0G2 on April 5, 2012.
1.3 NATIONAL THERMAL POWER CORPORATION (NTPC):

National Thermal Power Corporation (NTPC) was originated in 1975 under the name "National Thermal Power Corporation Private Limited". In 1976 its first thermal power project was started at Singrauli in Uttar Pradesh. On September 30, 1985 Company was converted into a public limited company. It also diversified its generation after 1985.

NTPC Limited formerly (National Thermal Power Corporation) an Indian state-owned electric utilities company and is based in New Delhi, India. NTPC's core business is generation, distribution and sale of power to state-owned power companies in India. The company also undertakes consultancy and turnkey project contracts that comprise of engineering, project management, construction management and operation and management of power plants. The company has also ventured into oil and gas exploration and coal mining activities. In May 2010, NTPC was conferred ‘Maharatna’ status by the Union Government of India. It is listed in Forbes Global 2000 for 2012 at 384th rank in the world. NTPC operates from 55 locations in India, one location in Sri Lanka and 2 locations in Bangladesh. National Thermal Power Corporation (NTPC) achieved 49th rank among the largest independent power producers and energy traders by global energy company ranking.

1.4 SIGNIFICANCE OF POWER IN ECONOMY

Power is essential for each and every economy to function. The electricity industry, specifically in the industrialized world, must play an important role. Without power current and future generations will not be able to achieve economic progress and prospects for economic growth. There will not be any prosperity on global scale especially for developing countries. Secure, consistent and reasonable energy sources keep central

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9 This information is retrieved from http://www.icsi.edu/WebModules/Programmes/CGAward/2009/cga2007winners.htm on July 13, 2011

10 This information is retrieved from http://www.forbes.com/companies/ntpc/ on October 17, 2011

11 This information is retrieved from http://en.wikipedia.org/wiki/National_Thermal_Power_Corporation on December 20, 2010

12 This information is retrieved from http://top250.platts.com/Top250Rankings/2013/AsiaPacificRim/IndependentPowerProducersandEnergyTraders on dated September 8, 2013

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importance for economic stability and progress. Now a days there is a need for energy efficient demand side technologies. Challenges of climate change and dependency on increasing import higher prices should be kept in mind while dealing. Underdeveloped countries face problems due to lacking energy resources, importing fuels and less foreign exchange reserves. In earlier spans power organization and infrastructure is improved well. However a lot of improvement is needed for more and more facilities to each and every area. Rising population presents a need to accept new skills and technologies, because growing population will create significant requirements for new energy infrastructure expansion. Transmission and distribution losses need to be reduced for better and cheap electricity generation. In the present framework technical and non-technical losses needs to be reduced. Technical losses arise naturally caused by functional problems. Non-technical losses are caused by outer system and a part of actions done by consumers and administration etc. Non-technical losses are avoidable and reduced for better supply. To some extent, line losses can also be reduced and electricity efficiency can be increased by providing smart grids and by having technically sound engineers.

1.5 IMPORTANCE OF POWER SECTOR IN INDIAN ECONOMY

Power is a vital necessity for all spheres of our life. It has been found as a fundamental human need. It is a significant infrastructure on which the social and economical progress of the country depends. Supply of power at sensible rates to the rural areas is indispensable for the overall development of the nation. Equally important is availability of reliable and quality power supply at viable rates to Indian industry also to make it internationally competitive; further to facilitate it to exploit the incredible prospective of employment creation. Services sector has made significant contribution in the growth of our national economy. Accessibility of quality supply of power is very vital for continued growth of this sector.\textsuperscript{13} Power keeps primary importance in any economy. Accessibility to power gives energy to an economy and as a result the economic growth becomes sustainable.

India’s total installed generation capacity is 2, 25,793.10 MW by the year 2013. Out of this; thermal power is 307,695-98 MW, hydro power is 39,623.40 MW , nuclear power is

\textsuperscript{13} This information is retrieved from http://www.powermin.nic.in/JSP_SERVLETS/internal.jsp# on May 5, 2012.
4,780.00 MW and Renewable Energy Sources (RES) (include Small Hydro Project, Biomass Gasifier, Biomass Power, Urban & Industrial Waste Power and Wind Energy) is 27,541.71 MW. All state electricity boards are playing crucial function in generating, transmitting and supplying electricity. National power policy was initiated in agreement to section 3 of the Electricity Act 2003. The National Power Policy provides for laying strategy for accelerated development of the power sector with providing supply of electricity to all areas and protecting interests of customers and other stakeholders. The National Power Policy has been evolved in discussion with and considering the views of the State Governments, Central Electricity Authority (CEA), Central Electricity Regulatory Commission (CERC) and other stakeholders of the prime importance. Various schemes have been launched by the government under planning period to promote supply of electricity. Under 10th five year plan government of India launched Accelerated Power Development Programme (APDP). Under this special Programme, Government of India provides Additional Central support for amplification and up gradation of sub-transmission and distribution network. Under 11th five year plan Government of India launched Restructured Accelerated Power Development and Reforms Programme (R-APDRP) in July 2008, with focus on founding of the base line data, fixation of accountability, reduction of AT&C, losses up to 15% level through strengthening & up-gradation of Sub Transmission and Distribution network and adoption of Information Technology. Under Rural Electrification Initiatives, Government of India launched Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY). This scheme was implimented for creating power infrastructure in villages and completing domestic electrification and up gradation of available power systems. There have been various positive aspects of Rajiv Gandhi Gramin Vidyutikaran Yojana for the profits of end consumers like presence of

14This information is retrieved from http://www.powermin.nic.in/JSP_SERVLETS/internal.jsp on August 14, 2012.

15This information is retrieved from http://www.powermin.nic.in/JSP_SERVLETS/internal.jsp# on August 28, 2012.

16This information is retrieved from http://www.powermin.nic.in/distribution/apdrp/projects/about_apdrp.htm on September 5, 2011.

17This information is retrieved from http://www.pfcindia.com/Content/R_APDRP.aspx on December 9, 2011.
information with regard to details of areas electrified, franchise system, details regarding launching of schemes and its objectives etc.  

But more efforts are necessary to enhance the condition of power in India. Government should improve all the aspects of power generation and transmission. State of the art techniques should be used and state governments should be caught up well in linking the substructure all over the nation.

Table 1.1 is a list of state and union territories by installed capacity of power utilities with electricity generation mode break-up as on June 30, 2012 and January 31, 2013 with figures in millions of watts (Megawatts).

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18 This information is retrieved from http://india.gov.in/official-website-rajiv-gandhi-grameen-vidyutikaran-yojana on December 10, 2012
Table 1.1

LIST OF STATE AND UNION TERRITORIES BY INSTALLED CAPACITY OF POWER UTILITIES:

<table>
<thead>
<tr>
<th>Rank</th>
<th>State/Union Territory</th>
<th>Total Installed Capacity</th>
<th>Total Thermal</th>
<th>Nuclear</th>
<th>Hydro</th>
<th>Renewable energy*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maharashtra</td>
<td>28,310.83</td>
<td>20,354.72</td>
<td>690.14</td>
<td>3,331.84</td>
<td>3,934.13</td>
</tr>
<tr>
<td>2</td>
<td>Gujarat</td>
<td>23,887.54</td>
<td>18,841.32</td>
<td>559.32</td>
<td>772.00</td>
<td>3,714.90</td>
</tr>
<tr>
<td>3</td>
<td>Tamil Nadu</td>
<td>18,382.13</td>
<td>8,217.33</td>
<td>524.00</td>
<td>2,137.20</td>
<td>7,503.60</td>
</tr>
<tr>
<td>4</td>
<td>Andhra Pradesh</td>
<td>16,817.13</td>
<td>11,771.08</td>
<td>275.78</td>
<td>3,734.53</td>
<td>1,035.74</td>
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<tr>
<td>5</td>
<td>Uttar Pradesh</td>
<td>13,994.99</td>
<td>11,062.87</td>
<td>335.72</td>
<td>1,821.42</td>
<td>724.98</td>
</tr>
<tr>
<td>6</td>
<td>Karnataka</td>
<td>13,596.28</td>
<td>6,355.65</td>
<td>254.86</td>
<td>3,599.80</td>
<td>3,385.97</td>
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<tr>
<td>7</td>
<td>Rajasthan</td>
<td>10,704.57</td>
<td>6,077.13</td>
<td>573.00</td>
<td>1,527.80</td>
<td>2,526.64</td>
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<tr>
<td>8</td>
<td>Bihar</td>
<td>9,295.73</td>
<td>9,070.50</td>
<td>0.00</td>
<td>129.43</td>
<td>95.80</td>
</tr>
<tr>
<td>9</td>
<td>Madhya Pradesh</td>
<td>9,288.86</td>
<td>5,302.15</td>
<td>273.24</td>
<td>3,223.66</td>
<td>489.81</td>
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<tr>
<td>10</td>
<td>West Bengal</td>
<td>8,507.29</td>
<td>7,229.54</td>
<td>0.00</td>
<td>1,182.30</td>
<td>171.45</td>
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<tr>
<td>11</td>
<td>Haryana</td>
<td>8,113.75</td>
<td>6,518.21</td>
<td>109.16</td>
<td>1363.18</td>
<td>123.20</td>
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<td>12</td>
<td>Punjab</td>
<td>7,502.97</td>
<td>3,898.46</td>
<td>208.04</td>
<td>3,014.89</td>
<td>381.58</td>
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<tr>
<td>13</td>
<td>Delhi Territory</td>
<td>7,163.15</td>
<td>6,356.42</td>
<td>122.08</td>
<td>666.12</td>
<td>18.53</td>
</tr>
<tr>
<td>14</td>
<td>Odisha</td>
<td>6,596.33</td>
<td>4,332.10</td>
<td>0.00</td>
<td>2,166.93</td>
<td>97.30</td>
</tr>
<tr>
<td>15</td>
<td>Damodar Valley Corporation</td>
<td>6,338.86</td>
<td>6,145.60</td>
<td>0.00</td>
<td>193.26</td>
<td>0.00</td>
</tr>
<tr>
<td>16</td>
<td>Chhattisgarh</td>
<td>5,624.61</td>
<td>5,175.94</td>
<td>47.52</td>
<td>120.00</td>
<td>281.15</td>
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<tr>
<td>17</td>
<td>Kerala</td>
<td>3,836.48</td>
<td>1,687.94</td>
<td>95.60</td>
<td>1,881.50</td>
<td>171.44</td>
</tr>
<tr>
<td>18</td>
<td>Himachal Pradesh</td>
<td>3,714.10</td>
<td>197.17</td>
<td>34.08</td>
<td>2,950.94</td>
<td>531.91</td>
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<tr>
<td>19</td>
<td>Jharkhand</td>
<td>2,269.86</td>
<td>2,048.88</td>
<td>0.00</td>
<td>200.93</td>
<td>20.05</td>
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<tr>
<td>20</td>
<td>Uttarakhand</td>
<td>2,556.56</td>
<td>350.23</td>
<td>22.28</td>
<td>1,998.18</td>
<td>185.87</td>
</tr>
<tr>
<td>Rank</td>
<td>State/Union Territory</td>
<td>Total Installed Capacity</td>
<td>Total Thermal</td>
<td>Nuclear</td>
<td>Hydro</td>
<td>Renewable energy*</td>
</tr>
<tr>
<td>------</td>
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<td>---------------</td>
<td>---------</td>
<td>--------</td>
<td>------------------</td>
</tr>
<tr>
<td>21</td>
<td>Jammu and Kashmir</td>
<td>2,393.55</td>
<td>609.59</td>
<td>77.00</td>
<td>1,576.43</td>
<td>130.53</td>
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<tr>
<td>22</td>
<td>Assam</td>
<td>1,020.04</td>
<td>559.21</td>
<td>0.00</td>
<td>429.72</td>
<td>31.11</td>
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<td>23</td>
<td>Goa</td>
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<td>362.47</td>
<td>25.80</td>
<td>0.00</td>
<td>30.05</td>
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<tr>
<td>24</td>
<td>Meghalaya</td>
<td>373.62</td>
<td>28.01</td>
<td>0.00</td>
<td>314.58</td>
<td>31.03</td>
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<td>25</td>
<td>Puducherry Territory</td>
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<td>19.28</td>
<td>0.00</td>
<td>0.03</td>
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<tr>
<td>26</td>
<td>Tripura</td>
<td>265.07</td>
<td>186.69</td>
<td>0.00</td>
<td>62.37</td>
<td>16.01</td>
</tr>
<tr>
<td>27</td>
<td>Sikkim</td>
<td>206.48</td>
<td>79.10</td>
<td>0.00</td>
<td>75.27</td>
<td>52.11</td>
</tr>
<tr>
<td>28</td>
<td>Arunachal Pradesh</td>
<td>229.04</td>
<td>36.93</td>
<td>0.00</td>
<td>97.57</td>
<td>94.54</td>
</tr>
<tr>
<td>29</td>
<td>Manipur</td>
<td>157.80</td>
<td>71.37</td>
<td>0.00</td>
<td>80.98</td>
<td>5.45</td>
</tr>
<tr>
<td>30</td>
<td>Mizoram</td>
<td>138.92</td>
<td>68.14</td>
<td>0.00</td>
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<td>36.47</td>
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<td>31</td>
<td>Nagaland</td>
<td>103.18</td>
<td>21.19</td>
<td>0.00</td>
<td>53.32</td>
<td>28.67</td>
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<td>32</td>
<td>NLC</td>
<td>100.17</td>
<td>100.17</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>33</td>
<td>Chandigarh Territory</td>
<td>105.71</td>
<td>45.13</td>
<td>8.84</td>
<td>51.74</td>
<td>0.00</td>
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<tr>
<td>34</td>
<td>Dadra and Nagar Haveli Territory</td>
<td>74.38</td>
<td>65.92</td>
<td>8.46</td>
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<td>Daman and Diu Territory</td>
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<td>37.02</td>
<td>7.38</td>
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<td>0.00</td>
</tr>
<tr>
<td>36</td>
<td>Andaman and Nicobar Islands Territory</td>
<td>65.40</td>
<td>60.05</td>
<td>0.00</td>
<td>0.00</td>
<td>5.35</td>
</tr>
<tr>
<td>37</td>
<td>Lakshadweep Territory</td>
<td>14.97</td>
<td>9.97</td>
<td>0.00</td>
<td>0.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

Renewable Energy Sources (RES) includes small hydro projects, wind, solar, tidal, biomass and urban & industrial waste power.\(^{19}\)

\(^{19}\) This information is retrieved from
1.6 BACKGROUND AND IMPORTANCE OF POWER SECTOR IN HARYANA

Earlier, Haryana State Electricity Board (HSEB) was constituted on May 3, 1967 under Section 5(1) of the Electricity Supply Act, 1948. This Board was responsible for generation, transmission and distribution of power in the entire state of Haryana. Haryana State Electricity Board (HSEB) was assigned the comprehensive liability for the power sector in Haryana20. On November 1, 1966, when the state Haryana was formed, the state was allotted 383 MW thermal based generation power capacities. At that time, Haryana Government was reliant for its electricity necessities on Bhakhra Beas Management Board (BBMB) hydro power project located in Punjab. It was initiated as shared venture of Punjab and Rajasthan. Afterwards, it was constituted under the Punjab Re-organisation Act, 196621.

So Haryana received its share from the adjoining state. Later on, Haryana got its share from Nathpa Jhakri project of hydro-electricity of 1500MW, located in Himachal Pradesh and from the generation units of central undertakings of the Government of India.22 After some time, picture changed somewhat. On November 7, 1975 National Thermal Power Corporation (NTPC) was built-in, a gas based plant at Faridabad. But as we know that power is essential for the development of any state; without advanced infrastructure, development of any type is not possible and electricity is a major part of infrastructure development. For rising population and the increasing industrial area, the developed status of electric power was must. Number of clients grew rapidly. It was 3.5 lacs. In 1967-68 and it became 35.27 lacs in 2000-01 and electricity consumption also increased promptly in the same pattern. It was 5429 Lacs (KW) in 1967-68 and it became 101436 Lacs (KW) in 2000-01. At that time, total villages were 6759 and all villages got electrified till 1998-99.23 Haryana became the first state in the country to supply power to each village of the state. Reasons behind poor financial performance of the HSEB were;

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20This information is retrieved from order by HERC on dated 14 Dec., 2010 on Annual Revenue Report for transmission and Build Supply business for 2000-01 and transmission and Bulk Supply Tariffs

21This information was retrieved from http://hoshiarpur.nic.in/bbmb.htm on July 12, 2011

22This information is retrieved from http://sjvn.nic.in/projects/projects_nathpa.asp on August 15, 2012

23This information is retrieved from http://planningcommission.nic.in/plans/stateplan/sdr/sdr_haryana1909.pdf on June 8, 2013
poor collection competence for metering and billing default Government departments. As a result, receivables from sale of power were lofty. Between 1990-91 and 1997-98, receivables almost doubled in monetary terms. HSEB had to holdup payments to its creditors and its payables also doubled between 1990-91 and 1997-98. Even though the state government provided subsidy but in reality, it was often managed against other payments due to the Government. 24 So it was an urgent requirement of state government to initiate the implementation of power sector reforms.

1.7 POWER SECTOR REFORMS IN HARYANA

The power sector is an inventor of progress in any state. Circumstances of power were in bad shape in the state earlier. Haryana’s requirement for power was increasing everyday and generation competence was not able to match the requirement. As a result of this situation, requirements for reforms in power sector were recognised and Haryana became second state after Orissa to execute power sector reforms. Haryana made thirst on reforms since there was a need of sustainable development in the state. For constant progress with respect to increasing investments, healthy environment, increasing generation capacity, increasing facility, increasing efficiency in the state, Government required to get rid of the load of subsidies to counter for the losses. Restructuring programme intended to re-establish well-built power sector in the state.

In order to achieve sustainable development, the State Assembly enacted ‘The Haryana Electricity Reform Bill, 1997’. The Haryana Electricity Reform Act, 1997 became effective from August 14, 1998. The Act envisaged establishment of Haryana Electricity Regulatory Commission for amplification of generation, transmission, distribution, trading and use of electricity all over. As an outcome, Haryana Electricity Regulatory Commission was established on August 17, 1998. It contemplated measures for accomplishment of development regarding electricity industry to all areas such as areas validation of electricity in charges, ensuring clear policies regarding subsidies, encouragement of efficient and environmentally approving policies, constitution of

24This information is retrieved from http://herc.gov.in/orders/html/trfdrs_00_01/chp2_9.html on December 4, 2012
Central Electricity Authority, Regulatory Commissions and establishment of Appellate
Tribunal and for matters connected therewith. The Act also provided opportunity for the
involvement of private players in the power sector in the state.25

1.8 UNBUNDLING AND PRIVATIZATION

The state government unbundled the erstwhile Haryana State Electricity Board (HSEB) in
August 1998 into separate functional entities as below:

- Haryana Power Generation Corporation Limited (HPGCL)
- Haryana Vidyut Prasaran Nigam Limited (HVPNL)
- Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL)
- Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL)

Haryana Power Generation Corporation Limited (HPGCL) was established for generation
of power and Haryana Vidyut Prasaran Nigam Limited (HVPNL) for transmission and
supply of electricity in the State. Uttr Haryana Bijli Vitran Nigam Limited (UHBVNL)
and Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) were established for
distributing of power state-wise.

As a part of the reorganization of Haryana State Electricity Board (HSEB), all property,
interest in property, rights and liabilities of the Board were vested with the state government
on 14th August, 1998. The state Government, in turn, transferred the same on the same day
through the First Transfer Scheme to two new companies incorporated under the Companies
Act, 1956. Haryana Power Generation Company Limited (HPGCL) assumed the generation
functions while transmission, distribution and system operation functions of Haryana State
Electricity Board (HSEB) were transferred to Haryana Vidyut Prasaran Nigam Limited
(HVPNL). Thus, Haryana State Electricity Board (HSEB) ceased to exist from August 14,
1998.

25 This information is retrieved from www.herc.gov.in/orders/pdf/drspdfdown/drs_chapter1.pdf on
December 5, 2012.
1.9 HARYANA POWER GENERATION CORPORATION LIMITED (HPGCL)

On March 17, 1997 Haryana Power Generation Corporation came into existence. It was assigned the responsibility of working projects run by the state, maintaining them and also setting up new power generation projects. Thus, activities related to generation of power were shifted from Haryana State Electricity Board (HSEB) to Haryana Power Generation Corporation Limited (HPGCL) on August 14, 1998 with the aim of excellence in power generation, the state’s own generating stations Haryana Power Generation Corporation Limited (HPGCL) came into existence.26

Over the time, Haryana Power Generation Corporation Limited (HPGCL) established itself as a dynamic, growth oriented, world Class Corporation. Even now the corporation has not sufficient generation capacity which can bridge the gap between demand and supply. It gives a new standard in operating existing projects and even establishing new projects and tried to become global and competitive, for its power stations. It also put pollution control equipment to all its power stations. It also tried to minimize the impact of fly ash on the environment. It has also developed “Green Belt” in the plants and surrounding areas to generate eco-friendly power.27

1.10 OBJECTIVES OF HARYANA POWER GENERATION CORPORATION LIMITED (HPGCL)

- To provide cost effective, uninterrupted quality power at optimum efficiency.
- To make Haryana a power surplus State by maximizing generation from existing plants and by planning and implementing new generation projects.
- To explore all possible alternate sources of power generation.
- To minimize the impact of fly ash on the environment and to develop green belt.
- To monitor stack emission, ambient air quality, noise level, effluents etc.
- To minimize damage to men, material and machinery28.

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26 This information is retrieved from www.hpgcl.gov.in/home on June 7, 2013
27 This information is retrieved from www.hpgcl.gov.in/about us on June 6, 2013.
28 This information is retrieved from http://www.hpgcl.gov.in/aboutus_2.hp on July 22, 2012
1.11 POWER GENERATING UNITS OF HARYANA POWER GENERATION CORPORATION LIMITED (HPGCL)

The following thermal units are engaged in the generation of power in the state\[29\]:

- Panipat Thermal Power Station, Panipat
- Deen Bandhu Chhotu Ram Thermal Power Project, Yamuna Nagar
- Rajiv Gandhi Thermal Power Project, Khedar, Hisar

Indra Gandhi Super Thermal Power Project, Jhajjar is also contributing in generation of power on generation sharing basis. In addition, WYC Hydro Electric Station, Yamuna Nagar and Kakroi Micro Hydel Project, Kakroi, Sonepat, are also generating power on small scale as hydro power projects.

1.12 UNDER IMPLEMENTATION UNITS OF HARYANA POWER GENERATION CORPORATION LIMITED (HPGCL)

The following units are operational under the unit of HPGCL\[30\]:

- 3X500 MW Indira Gandhi Super Thermal Power Project (IGSTPP), Jhajjar
- 1320 MW Mahatma Gandhi Thermal Power Project in Jhajjar

1.13 FUTURE UNITS OF HARYANA POWER GENERATION CORPORATION LIMITED (HPGCL)

In addition, the HPGCL has also proposed the following units:

- 1500 MW Gas based Project at Faridabad.
- 660 MW capacity additional super critical Thermal Unit at Yamuna Nagar as an extension of 2x300 MW DCRTPP, Yamuna Nagar.
- 2800 MW (4x700 MW) Nuclear Power Plant at Gorakhpur in Distt. Fatehabad near Village Gorakhpur – Site stands identified by Nuclear Power Corporation of India. Govt. of India has approved the setting of this Nuclear Power Project.\[31\]

\[29\] This information is retrieved from http://www.hpgcl.gov.in/aboutus_2.hp on September 9, 2012

\[30\] This information is retrieved from http://www.hpgcl.gov.in/operational performance/installed capacity on January 19, 2013
1.14 NEW PROJECTS RELATED TO RENEWABLE ENERGY

In addition to above said initiatives, the Govt. is committed to the following in order to augment the clean supply of energy:

- Six biomass power projects of 63 MW capacities with an investment of ₹300 crores are being setup in the state by the Independent Power Producer (IPP), out of which two projects of about 20 MW are at final state of completion.

- For generation of power from industrial waste, 11 projects of 24.95 MW capacities through cogeneration route have been setup in the industries and four projects of 12.6 MW capacities are under installation. To produce power from the biogases in Sugar Mills through cogeneration route, six power projects of 46.8 MW have been setup in the Sugar Mills of the State.

- Four small hydro power projects of 10.8 MW capacities with an investment of ₹112 crores have been commissioned in the state through Independent Power Producer.

- Five small hydro power projects of 10.90 MW capacities is in progress.

- Solar power project is going to install 5552 SPV Street Lighting Systems with an investment of ₹12.11 crores in 369 villages of State having 50 percent or more SC population have been completed.

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31 This information is retrieved from www.hpgcl.gov.in/power plants/future projects on dated September 1, 2012.

32 This information is retrieved from Indian statistical Abstract 2013

33 This information is retrieved from Indian statistical Abstract 2013
1.15 HARYANA VIDYUT PRASARAN NIGAM LIMITED (HVPNL)

On August 19, 1997, Haryana Vidyut Prasaran Nigam Limited (HVPNL) was built-in as a company under the Companies Act. It initiated its functioning on September 18, 1997 and the functioning of HSEB was shifted to HVPNL on August 14, 1998 for distribution and transmission of power in the state. HVPNL was assigned accountability of transmission and distribution of electricity through relocate scheme notified by the Government and Haryana Electricity Regulatory Commission and was accorded license for transmission and bulk supply of electricity. The Company has also been entrusted with the ownership concern in two projects: BBMB and Indraprasth Power Station (Delhi Vidyut Board). Haryana Vidyut Prasaran Nigam Limited (HVPNL) was organized to maintain an integrated and efficient power transmission system network related to Planning, designing, construction, manufacturing and maintenance of transmission lines, sub-stations of voltage level 66KV and above. It tried to provide quality service and to reduce transmission losses. The Government of state implemented a Second Transfer Scheme on July 1, 1999 to transfer distribution system assets and liabilities from HVPNL to two distribution subsidiaries, Uttri Haryana Bijli Vitaran Nigam Limited (UHBVNL) and Dakshin Haryana Bijli Vitaran Nigam Limited (DHBVNL).

1.16 OBJECTIVES OF HARYANA VIDYUT PRASARAN NIGAM LIMITED (HVPNL)

- Planning, design, construction, erection and maintenance of transmission lines, sub-stations of voltage level 66KV & above and communication facilities and appurtenant works.
- Maintaining an integrated and efficient power transmission system network.
- Wheeling of power in accordance with the policies, guidelines laid down by the State Government and Haryana Electricity Regulatory Commission (HERC) from time to time.
- Monitoring and maintaining Grid discipline and resolve Grid issues.
- Resourcing funds for Plan implementation.

34 This information is retrieved from www.hvpnll.gov.in/about us on dated June 1, 2013.
• Augmenting and strengthening Power Transmission capability consistent with requirements.
• Acting as State Transmission Utility.
• Ensuring adequate, safe and economical transmission of electricity with regard to quality, availability and reliability of services.35

1.17 UTTAR HARYANA BIJLI VITRAN NIGAM LIMITED (UHBVNL)

Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) distributes retail power supply in the northern region of Haryana. Haryana Power Purchase Center (HPPC), has been assigned the power of retail supply which is a joint forum of UHBVN and DHBVN. It is registered under the companies Act 1956 and purely a government of Haryana undertaking. On July 1, 1999 it commenced its operations and is regulated by Haryana Electricity Regulatory Commission. So Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) holds the license of electricity supply issued by Haryana Electricity Regulatory Commission (HERC) on November 4, 2004 and maintaining adequacy in supply of electricity in efficient and economic manner.36

1.18 OBJECTIVES OF UTTAR HARYANA BIJLI VITRAN NIGAM LIMITED (UHBVNL)

To arrange for the supply of electricity that may be required within the jurisdiction of UHBVN in an efficient & economical manner, with particular reference to the areas, which are not for the time being supplied or adequately supplied with electricity.

• To supply electricity as soon as practicable to a licensee/other person requiring such supply.
• To exercise such control in relation to the generation, distribution & utilization of electricity within the area of jurisdiction of UHBVN.

35This information is retrieved from http://www.hvpn.gov.in/page.php?page=2 on December 3, 2013
36 This information is retrieved from www.uhbvnl.com on June 5, 2013
• To collect data on the demand for, and the use of, electricity & to formulate perspective plans in co-ordination with the Generating Company.

• To prepare and carry out schemes for transmission, distribution & generally for promoting the use of electricity within the State.

• To maintain uninterrupted supply to consumers within limits of following declared voltage.\(^\text{37}\)

The following districts of the State of Haryana lie under the jurisdiction area of UHBVNL:

- Panchkula
- Ambala
- Yamuna Nagar
- Kurukshetra
- Kaithal
- Karnal
- Panipat
- Sonepat
- Rohtak
- Jhajjar
- Jind\(^\text{38}\)

\(^{37}\)This information is retrieved from http://uhbvn.com/Aim_and_goals.aspx on December 3, 2013

\(^{38}\)This information is retrieved from http://indianpowersector.com/home/2010/09/haryana/ on September 16, 2012
1.19 DAKSHIN HARYANA BIJLI VITRAN NIGAM LIMITED (DHBVN)

Dakshin Haryana Bijli Vitaran Nigam Limited (DHBVN) is also a government undertaking which look at the retail electricity supply in the southern region of Haryana. It also started its operations in July, 1999. This Nigam also tried to achieve targets and standard in its working. Safe and sound power supply was the main aim of this Nigam. Through this it tried to encourage development in the region by reducing line losses. It tried to become modern through e-billing, e–tendering, network mapping, data logging, remote meter reading and electricity distribution automation etc.

1.20 OBJECTIVES OF DAKSHIN HARYANA BIJLI VITRAN NIGAM LIMITED (DHBVN)

- To serve masses by extending reliable, quality, uninterrupted, safe and clean power to consumers at affordable tariff to boost agricultural, industrial and economic development in Haryana.

- To improve the collection efficiency of consistently achieving high growth and financial viability and to bring down line losses.

- To impart honesty, integrity and transparency in actions to achieve higher level of consumer satisfaction.

- To encourage and support energy savings activities and demand side management optimizing the use of electricity.

- To inculcate modernization of management to bring about cost effectiveness and efficiency in functioning.

- To take initiatives in view of new technology for improving efficiency, accounting and information level and consumer satisfaction.\(^\text{40}\)

\(^{39}\) This information is retrieved from http://en.wikipedia.org/wiki/Dakshin_Haryana_Bijli_Vitran_Nigam on October 16 , 2013

\(^{40}\) This information is retrieved from http://www.dhbvn.com/main/aboutus/mission.htm on December 3, 2011
The following districts of the State of Haryana lie under the jurisdiction of DHBVNL:

- Hisar
- Fatehabad
- Bhiwani
- Sirsa
- Faridabad
- Gurgaon
- Mewat
- Rewari
- Mahendergarh

1.21 HARYANA ELECTRICITY REGULATORY COMMISSION (HERC)

Haryana Electricity regulatory commission was established on August 17, 1998 as a statutory body consequent to Haryana Electricity Reform Act, 1997. Haryana Electricity Regulatory Commission was assigned the power to determine the tariff for generation, transmission and supply of electricity in bulk and in retail. 

1.22 FUNCTIONS OF HARYANA ELECTRICITY REGULATORY COMMISSION (HERC)

Main functions of the HERC are as under:-

- To determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, within the State.

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41 This information is retrieved from www.dhbvn.com/aboutus on June 4, 2012
42 This information is retrieved from www.herc.gov.in/overview on June 5, 2012
• To regulate the power purchase and procurement process of supply licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State.

• To facilitate intra-state transmission and wheeling of electricity.

• To Issue the licenses to persons looking for transmission licenses, distribution licenses and electricity traders with respect to their operations within the State.

• To promote generation and co-generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also to specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution license.

• To adjudicate upon the disputes between the licensees and generating companies and to refer any dispute for settlement.

• To levy fee for the purposes of this Act.

• To specify State Grid Code consistent with the Grid Code specified under clause (h) of sub-section (1) of section 79.

• To specify or enforce standards with respect to quality, continuity and reliability of service by licensees.

• To fix the trading margin in the intra-state trading of electricity, if necessary.

• To discharge such other functions as may be assigned to it under this Act.\(^\text{43}\)

\(^{43}\) This information is retrieved from http://www.herc.nic.in/mainpages/over.html on December 10, 2012
1.2 ORGANISATIONAL STRUCTURE OF HARYANA POWER GENERATION CORPORATION LIMITED

This information is retrieved from www.hpgcl.gov.in/about_us/organizational/ on July 3, 2011.
1.3 ORGANISATIONAL STRUCTURE OF HARYANA VIDYUT PRASARAN NIGAM LIMITED

This information is retrieved from www.hvpnl.gov.in/about us/organizational-Figure on September 3, 2012.
1.4 ORGANIZATIONAL STRUCTURE OF UTTAR HARYANA BIJLI VITRAN NIGAM LIMITED

This information is retrieved from www.uhbvn.gov.in/about/organ-structure on July 5, 2012
1.5 ORGANISATIONAL STRUCTURE OF DAKISHIN HARYANA
BIJLI VITRAN NIGAM LIMITED

47 This information is retrieved from www.dhbvn.gov.in/about/organFigure.html on December 7, 2012
1.6 ORGANIZATIONAL STRUCTURE OF HARYANA ELECTRICITY REGULATORY COMMISSION

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48 This information is retrieved from http://www.herc.nic.in/mainpages/over.html on October 6, 2012