Notice of National Development and Reform Commission on Perfecting the Relevant Matters of Coal-Electricity Price Linkage Mechanism

FaGaiJiaGe[2015]No.3169

The development and reform commissions of all provinces, autonomous regions, municipalities directly under the Central Government, Price Bureau, China Huaneng Group, Datang International Power Generation Co., Ltd., China Huadian Corporation, China Guodian Corporation, State Power Investment, China Shenhua, China National Coal Group Corp., State Grid Corporation of China, China Southern Power Grid:

In order to implement the spirit of the "<<Several Opinions of the CPC Central Committee and the State Council on Further Deepening the Reform of the Electric Power System>> (ZhongFa (2015) No.9), "<<Several Opinions of the CPC Central Committee and the State Council on Promoting the Price Mechanism Reform>> (ZhongFa (2015) No.28) and decision-making deployment of the State Council on promoting the price reform, adapt to the change of coal electric power market situation, accelerate the healthy and coordinated development of coal electric power industry, by consent of the State Council, the relevant matters concerning further perfection of coal-electricity price linkage mechanism are notified as follows:

I. Make Clear the Benchmark of Coal-electricity Price Linkage Mechanism

On-grid electric quantity of coal-fired machine unit which doesn't participate in electric power market transaction and doesn't conduct unified dispatching at the provincial level or above should continue to carry out the benchmark on-grid electricity price policy and coal-electricity price linkage mechanism. Coal-electricity price linkage mechanism adopts year as the cycle, should be conducted unified deployment and startup by National Development and Reform Commission, should be organized and implemented with province (district, city) as the unit. Thermal coal price of coal-electricity price linkage mechanism is determined by China thermal coal price index. Thermal coal price adopts average price of all provinces (price range) of China thermal coal price index 2014 as the benchmark coal price; adopt the on-grid electricity price corresponding to benchmark coal price as the benchmark electricity price in
principle. In future, when implements coal-electricity price linkage each time, thermal coal price and on-grid electricity price should be respectively calculated comparing with benchmark coal price and benchmark electricity price. Determine whether the above benchmark coal price and benchmark electricity price is adjusted before year 2020 according to the actual situation.

II. Make Clear the Specific Contents of Coal-Electricity Price Linkage Mechanism.
Implement the interval linkage on coal-electricity price. Adopt thermal coal price of standard product (represented by 5,000 kcal/kg) as the standard, when thermal coal price is fluctuated for not more than RMB 30 Yuan (inclusive) comparing with benchmark coal price during the cycle, cost change is consumed by the power generation enterprise itself, doesn't start up linkage mechanism. When thermal coal price is fluctuated for more than RMB 30 Yuan (inclusive) comparing with benchmark coal price during the cycle, implement the tiered regressive linkage for excess portion, i.e. the portion when coal price is fluctuated for more than RMB 30 Yuan/ton but doesn't exceed RMB 60 Yuan (inclusive), linkage coefficient is 1. For the portion when coal price is fluctuated for more than RMB 60 Yuan/ton but doesn't exceed RMB 100 Yuan (inclusive), linkage coefficient is 0.9; For the portion when coal price is fluctuated for more than RMB 100 Yuan/ton but doesn't exceed RMB 150 Yuan (inclusive), linkage coefficient is 0.8; The portion when coal price is fluctuated for more than RMB 150 Yuan/ton, it is not linked any more. When adjustment level of on-grid electricity price after the measurement is less than RMB 0.2 Fen/kWh, linkage mechanism is not implemented in the same year, price adjustment amount should be accumulated to the next cycle for calculation. On-grid electricity price and electricity sales price which is adjusted according to coal-electricity price linkage mechanism should be implemented on January 1st each year.

III. Correspondingly adjust on-grid electricity price and electricity sales price.
Benchmark on-grid electricity price of coal-fired machine unit should be strictly measured and determined by coal-electricity price linkage mechanism; for specific formula, see Appendix 1. After the adjustment of on-grid electricity price, correspondingly adjust the electricity sales price. Of which, industrial and commercial electricity price should be correspondingly adjusted; adjustment level should be determined by on-grid electric quantity of coal-fired machine unit, on-grid electric quantity of other power sources, outsourced electric quantity condition, energy-saving and eco-friendly electricity price and other factors; for specific formula, see Appendix 2. Residential living, agricultural production electricity price remains relatively stable. Electricity sales price should be unfriendly determined the adjustment principle and price adjustment level of all provinces (price range) by National Development and Reform Commission; specific electricity price level of all kinds of electric power users should be formulated according to local actual situation by provincial-level price competent department, and should be published to the society for implementation.

IV. Stick to the promotion of electricity price marketization reform.
When perfects the coal-electricity price linkage mechanism, stick to the promotion of electricity price marketization reform, accelerate the electric power market construction, gradually lift the electric power price control over competitive link. On-grid electric quantity and electricity price participating in electric power market transaction should be determined through independent consultation by both parties. Electric power market transaction should stick to the principle of enterprise independent consultation, local government and relevant departments should not designate the transaction price, should not enforce the implementation of preferential electricity price policy for specific electric power users, should
not enforce or enforce in disguised form the forced transaction between the power generation enterprises and specific electric power users.

The above provisions should be implemented from January 1st, 2016; the previous provisions concerning coal-electricity price linkage mechanism should not be carried out any more.

Annex:

1. Calculation formula of linkage between benchmark on-grid electricity price of coal-fired machine unit and coal price
2. Calculation formula of linkage between electricity sales price and benchmark on-grid electricity price of coal-fired machine unit

National Development and Reform Commission
12/31/2015
Appendix 1

Calculation formula of linkage between benchmark on-grid electricity price of coal-fired machine unit and coal price

\[ P_\Delta = C_\Delta \div 5000 \times 7000 \times C_i \div 10000 \]

\( P_\Delta \): Benchmark on-grid electricity price adjustment level of coal-fired machine unit of current period, unit is “Fen/kWh”.

\( C_\Delta \): Thermal coal (calorific value of thermal coal is 5000 kcal/kg) price variation of coal-fired power generation enterprise of previous period, see the below table for specific calculation method, unit is “Yuan/ton”.

\( C_i \): Electricity supply standard coal consumption of previous period (calorific value of standard coal is 7000 kcal/kg), it is subject to prior-period average electricity supply standard coal consumption of coal-fired power generation enterprises of all provinces published to the society by China Electricity Council, unit is “gram/kWh”.

<table>
<thead>
<tr>
<th>Average coal price variation of previous period A (Yuan/ton)</th>
<th>Coal price calculation formula bringing into linkage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Exceed RMB 30 Yuan but doesn’t exceed RMB 60 Yuan (inclusive)</td>
<td>( C_\Delta = (A-30) \times 1 )</td>
</tr>
<tr>
<td>2 Exceed RMB 60 Yuan but doesn’t exceed RMB 100 Yuan (inclusive)</td>
<td>( C_\Delta = 30 + (A-60) \times 0.9 )</td>
</tr>
<tr>
<td>3 Exceed RMB 100 Yuan but doesn’t exceed RMB 150 Yuan (inclusive)</td>
<td>( C_\Delta = 30 + 40 \times 0.9 + (A-100) \times 0.8 )</td>
</tr>
<tr>
<td>4 Exceed RMB 150 Yuan</td>
<td>( C_\Delta = 30 + 40 \times 0.9 + 50 \times 0.8 )</td>
</tr>
</tbody>
</table>

\( A \): Increase and decrease amount of prior-period China thermal coal price index (by provinces) comparing with year 2014, unit is “Yuan/ton”.
Appendix 2

Calculation formula of linkage between electricity sales price and benchmark on-grid electricity price of coal-fired machine unit

\[ P = \frac{(M_a + M_h + M_e - M_d) \times P_\alpha + \sum_{i=1}^{n} M_i \times P_M + K}{M} \]

P: Total adjustment level of electricity sales price of the province

M_a: Prior-period on-grid electric quantity of coal-fired machine unit under unified control at the provincial-level or above

M_h: Prior-period on-grid electric quantity of renewable energy, coal-fired machine unit and other power sources with benchmark on-grid electricity price of coal-fired machine unit as the basis

M_e: Prior-period outsourced electric quantity of the province executed according to benchmark on-grid electricity price of coal-fired machine unit of the province

M_d: Prior-period outbound electric quantity of the province executed according to benchmark on-grid electricity price of coal-fired machine unit of the province

M_i: Prior-period outsourced electric quantity of the province executed according to benchmark on-grid electricity price of coal-fired machine unit of other provinces

P_\alpha: Adjustment level of benchmark on-grid electricity price of coal-fired machine unit of the province

P_M: Adjustment level of benchmark on-grid electricity price of coal-fired machine unit of outsourced electric quantity source province

M: Prior-period provincial-level power grid sales electric quantity

K: Unified electricity price policy impact factor: National Development and Reform Commission should accord with price negotiation condition of trans-provincial and interregional transacted electric quantity, promote the sales electricity price reform, push forward energy-saving and environmental protection, accelerate the sustainable development of coal industry, orderly guide the outstanding electricity price contradiction.
国家发展改革委关于完善煤电价格联动机制有关事项的通知
发改价格[2015]3169号

各省、自治区、直辖市发展改革委、物价局，华能、大唐、华电、国电、国家电投、神华、中煤集团公司，国家电网、南方电网公司：

为贯彻落实《中共中央国务院关于进一步深化电力体制改革的若干意见》（中发〔2015〕9号）、《中共中央国务院关于促进电力体制改革的若干意见》（中发〔2015〕28号）精神和国家发展改革委有关部署，适应煤炭电力市场形势变化，促进煤炭电力行业健康发展，经国家发展改革委同意，现就进一步完善煤电价格联动机制有关事项通知如下：

一、明确煤电价格联动机制基准

对于参与电力市场交易、由省级及以上统调机组上网电量，继续实行标杆上网电价政策和煤电价格联动机制。煤电价格联动机制以年度为周期，由国家发展改革委统一部署启动，以省（区、市）为单位组织实施。煤电价格联动机制依据的电煤价格按照中国电煤价格指数确定。电煤价格以中国电煤价格指数2014年各省份（价格）的平均价格为基准煤价，原则上以与基准煤价对应的上网电价为基准电价。今后，每次实施煤电价格联动，电煤价格和上网电价分别与基准煤价、基准电价相比较计算。在2020年之前，上述基准煤价和基准电价是否调整根据实际情况确定。

二、明确煤电价格联动机制具体内容

对煤电价格实行区间联动。以5000型大卡/千克作为价格调节品电煤价格为标准，当周期内电煤价格与基准煤价相比波动不超过每吨30元（含）部分的，成本变化由发电企业自行消化，不启动联动机制。当周期内电煤价格与基准煤价相比波动超过每吨30元的，对超过部分实施分档法定联动：即当煤电联动超过每吨30元且不超过60元（含）的部分，联动系数为1；煤电联动超过每吨60元且不超过100元（含）的部分，联动系数为0.9；煤电联动超过每吨100元且不超过150元（含）的部分，联动系数为0.8；煤电联动超过每吨150元的部分不再联动。按此测算后的上网电价调整水平不足每千瓦时0.2分时的，当年不实施联动机制，调价金额并入下一期累计计算。按煤电价格联动机制调整的上网电价和销售电价于当年1月1日实施。

三、相应调整上网电价和销售电价

燃煤机组标杆上网电价严格按照煤电价格联动机制测算确定，具体公式见附件1。上网电价调整后，相应调整销售电价。其中，工商业用电价格相应调整，调整水平应按燃煤机组上网电量、其他电源上网电量、外购电量情况以及节能环保电价等因素确定，具体公式见附件2；居民生活、农业生产用电价格保持相对稳定。销售电价由国家发展改革委统一确定调整原则和各省（区）调价水平，各类电力用户具体电价水平由省级价格主管部门根据本地实际情况制定，并向全社会公布实施。
四、继续推进电价市场化改革

在完善煤电价格联动机制的同时，要坚持推进电价市场化改革，加快电力市场建设，逐步放开竞争性环节电力价格。参与电力市场交易的上网电量电价，由交易双方自主协商确定。电力市场交易要坚持公平竞争原则，地方政府及有关部门不得指定交易价格，不得强制推行对特定电力用户的优惠电价政策，不得强制或变相强制发电企业与特定电力用户强行交易。

上述规定自2016年1月1日起实施，此前关于煤电价格联动机制的规定不再执行。

附件：1. 燃煤机组标杆上网电价与煤价联动计算公式
2. 销售电价与燃煤机组标杆上网电价联动计算公式

国家发展改革委
2015年12月31日
附件 1

燃煤机组标杆上网电价与煤价联动计算公式

\[ P_\Delta = C_\Delta \div 5000 \times 7000 \times C_i \div 10000 \]

\( P_\Delta \): 本期燃煤机组标杆上网电价调整水平，单位为“分/千瓦时”。

\( C_\Delta \): 上期燃煤发电企业电煤（电煤热值为 5000 大卡/千克）价格变动值，具体计算方法见下表，单位为“元/吨”。

\( C_i \): 上期供电标准煤耗（标准煤热值为 7000 大卡/千克），以中国电力企业联合会向社会公布的各省燃煤发电企业上期平均供电标准煤耗为准，单位为“克/千瓦时”。

<table>
<thead>
<tr>
<th>上期平均煤价变动值 A（元/吨）</th>
<th>纳入联动的煤价计算公式</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 超过 30 元不超过 60 元（含）的</td>
<td>( C_\Delta = (A-30) \times 1 )</td>
</tr>
<tr>
<td>2 超过 60 元不超过 100 元（含）的</td>
<td>( C_\Delta = 30 + (A-60) \times 0.9 )</td>
</tr>
<tr>
<td>3 超过 100 元的不超过 150 元（含）的</td>
<td>( C_\Delta = 30 + 40 \times 0.9 + (A-100) \times 0.8 )</td>
</tr>
<tr>
<td>4 超过 150 元的</td>
<td>( C_\Delta = 30 + 40 \times 0.9 + 50 \times 0.8 )</td>
</tr>
</tbody>
</table>

\( A \): 上期中国（分省）电煤价格指数与 2014 年相比增减额，单位为“元/吨”。
附件 2

销售电价与燃煤机组标杆上网电价联动计算公式

$$P = \frac{(M_a + M_b + M_c - M_d) \times P_{\Delta} + \sum_{i=1}^{n} M_i \times P_{\Delta_i} + K}{M}$$

P: 本省销售电价调整总水平

M_a: 上期由省级及以上统调的燃煤机组上网电量

M_b: 上期以燃煤机组标杆上网电价为基础的可再生能源、燃气机组等其他电源上网电量

M_c: 上期本省外购按照本省燃煤机组标杆上网电价执行的电量

M_d: 上期本省外送按照本省燃煤机组标杆上网电价执行的电量

M_i: 上期本省外购按照外省燃煤机组标杆上网电价执行的电量

P_{\Delta}: 本省燃煤机组标杆上网电价调整水平

P_{\Delta_i}: 外购电量来源省燃煤机组标杆上网电价调整水平

M: 上期省级电网销售电量

K: 统一电价政策影响因子。由国家发展改革委根据跨省跨区交易电量价格协商情况、推进销售电价改革、推动节能环保、促进煤炭行业可持续发展以及有序疏导突出电价矛盾等需要统一明确。