# DCP 216 EDCM LRIC model (revision r6984)

Wednesday 22 July 2015

* 1. This document describes an EDCM/LRIC tariff model developed for the DCP 216 working group. The reference version is the April 2015 pre-release model published by the DCUSA Panel in December 2014.

## New input data tables

* 1. The following new input data tables have been added to Sheet 11:
     1. 1101. Financial information
     2. 1110. Calendar and timeband information
     3. 1118. Generation information
     4. 1136. Maximum and minimum network use factors
     5. 1140. Data from CDCM model

## Additional or modified input data

* 1. One input data item has been changed in accordance with the instructions of the DCP 216 working group.
  2. The item labelled “The amount of money that the DNO wants to raise from use of system charges, less transmission exit (£/year)” in table 1113. General inputs of the reference model has been removed, and is replaced in the DCP 216 model by an item labelled as “The amount of money that the DNO wants to raise from use of system charges (£/year)” in table 1101. Financial information.
  3. As suggested by the new label, this change means that the amount entered in the new DCP 216 model should include transmission exit charges.

## Changes to formatting

* 1. The contents of table 3910. Super-red rate p/kWh (table 4258 in the reference model) have been formatted to three decimal points instead of two.

## Changes to calculations

* 1. The calculations in the model have changed to reflect the change to the treatment of transmission exit charges in the input data described above.
  2. Specifically, the calculation that was carried out in table 4362. Revenue less costs and adjustments (£/year) of the reference model has now been replaced with the calculation carried out in table 3706. Revenue less costs and adjustments (£/year) of the DCP 216 model.
  3. The following new calculation tables have been added to the DCP 216 as a consequence of the changes to the structure and layout of Sheet 11.
     1. 2402. Forecast system simultaneous maximum load (kW) from CDCM users
     2. 2406. Loss adjustment factor to transmission for each network level
     3. 2902. Assets in CDCM model (£)
     4. 3202. Diversity allowance between level exit and GSP Group
     5. 4016. Maximum network use factor
     6. 4018. Minimum network use factor

## Mapping of items in the reference model to the DCP 216 model

* 1. Table 1 shows the mapping of items between the reference model and the DCP 216 model produced in July 2015 (revision r6984).

| Table 1 Mapping of items between the reference model and the DCP 216 model | | |
| --- | --- | --- |
| *Table in reference model* | *Number in revision r6984* |
| 913. LRIC power flow modelling data | No change |
| 935. Tariff data | No change |
| 1100. Company, charging year, data version | No change |
| 1105. Diversity allowance between level exit and GSP Group (from CDCM table 2611) | - |
| 1113. General inputs | - |
| 1122. Forecast system simultaneous maximum load (kW) from CDCM users (from CDCM table 2506) | - |
| 1131. Assets in CDCM model (£) (from CDCM table 2706) | - |
| 1132. Override notional asset rate for 132kV/HV (£/kW) | No change |
| 1133. Maximum network use factor | - |
| 1134. Minimum network use factor | - |
| 1135. Loss adjustment factor to transmission for each network level (from CDCM table 2004) | - |
| 1181. LDNO discounts | No change |
| 1182. CDCM end user tariffs | No change |
| 1183. LDNO volume data | No change |
| 4102. Notional asset rate (£/kW) | 3002 |
| 4104. Power factor in 500 MW model | 2002 |
| 4106. Loss factor to transmission | 2502 |
| 4108. Active power equivalent of capacity adjusted to transmission (kW/kVA) | 3102 |
| 4110. Notional asset rate for 132kV/HV (£/kW) | 3004 |
| 4112. Notional asset rate adjusted (£/kW) | 3006 |
| 4114. Capacity 132kV/HV (£/kVA) | 3310 |
| 4116. Capacity EHV circuits (£/kVA) | 3306 |
| 4118. Capacity 132kV/EHV (£/kVA) | 3304 |
| 4120. Capacity EHV/HV (£/kVA) | 3308 |
| 4122. Capacity 132kV circuits (£/kVA) | 3302 |
| 4124. Total notional capacity assets (£/kVA) | 3312 |
| 4126. Maximum import capacity adjusted for part-year (kVA) | 2302 |
| 4128. Total notional capacity assets (£) | 3410 |
| 4130. Non-exempt post-2010 export capacity (kVA) adjusted for part-year | 2112 |
| 4132. Non-exempt 2005-2010 export capacity (kVA) adjusted for part-year | 2110 |
| 4134. Non-exempt pre-2005 export capacity (kVA) adjusted for part-year | 2108 |
| 4136. Chargeable export capacity adjusted for part-year (kVA) | 2114 |
| 4138. Exempt export capacity (kVA) adjusted for part-year | 2106 |
| 4140. Sole use asset MEAV for demand (£) | 2814 |
| 4142. Demand sole use asset MEAV adjusted for part-year (£) | 2818 |
| 4144. Total sole use assets for demand (£) | 3408 |
| 4146. Super-red kW divided by kVA adjusted for part-year | 2304 |
| 4148. Peak-time active power consumption adjusted to transmission (kW/kVA) | 2504 |
| 4150. Consumption EHV circuits (£/kVA) | 3318 |
| 4152. Consumption 132kV/EHV (£/kVA) | 3316 |
| 4154. Consumption 132kV circuits (£/kVA) | 3314 |
| 4156. Total notional consumption assets (£/kVA) | 3320 |
| 4158. Total notional consumption assets (£) | 3412 |
| 4160. Sole use asset MEAV for non-exempt generation (£) | 2816 |
| 4162. Generation sole use asset MEAV adjusted for part-year (£) | 2820 |
| 4164. Generation sole use asset MEAV adjusted for part-year (£) (aggregate) | 3414 |
| 4166. All notional assets in EDCM (£) | 3416 |
| 4202. Non-DSM import capacity adjusted for part-year (kVA) | 3902 |
| 4204. Location | 2116 |
| 4206. Linked location 1 | 2118 |
| 4208. Linked location 2 | 2120 |
| 4210. Linked location 3 | 2122 |
| 4212. Linked location 4 | 2124 |
| 4214. Linked location 5 | 2126 |
| 4216. Linked location 6 | 2128 |
| 4218. Linked location 7 | 2130 |
| 4220. Total active power in maximum demand scenario (kW) | 3904 |
| 4222. Inverse power factor, maximum demand (kVA/kW) | 3906 |
| 4224. Maximum demand run kVA at Linked location 2 | 2168 |
| 4226. Network charge 1 £/kVA/year at Linked location 5 | 2158 |
| 4228. Network charge 1 £/kVA/year at Linked location 3 | 2154 |
| 4230. Network charge 1 £/kVA/year at Linked location 4 | 2156 |
| 4232. Maximum demand run kVA at Linked location 6 | 2176 |
| 4234. Maximum demand run kVA at Linked location 3 | 2170 |
| 4236. Network charge 1 £/kVA/year at Linked location 7 | 2162 |
| 4238. Maximum demand run kVA at Linked location 5 | 2174 |
| 4240. Network charge 1 £/kVA/year at Location | 2148 |
| 4242. Maximum demand run kVA at Linked location 4 | 2172 |
| 4244. Maximum demand run kVA at Linked location 1 | 2166 |
| 4246. Network charge 1 £/kVA/year at Linked location 1 | 2150 |
| 4248. Network charge 1 £/kVA/year at Linked location 6 | 2160 |
| 4250. Maximum demand run kVA at Linked location 7 | 2178 |
| 4252. Maximum demand run kVA at Location | 2164 |
| 4254. Network charge 1 £/kVA/year at Linked location 2 | 2152 |
| 4256. Average network charge 1 (£/kVA/year) | 2182 |
| 4258. Super-red rate p/kWh | 3910 |
| 4260. Super-red unit rate adjusted for DSM (p/kWh) | 3912 |
| 4262. Local charge 1 £/kVA/year at Linked location 5 | 2142 |
| 4264. Local charge 1 £/kVA/year at Linked location 3 | 2138 |
| 4266. Local charge 1 £/kVA/year at Linked location 4 | 2140 |
| 4268. Local charge 1 £/kVA/year at Linked location 7 | 2146 |
| 4270. Local charge 1 £/kVA/year at Location | 2132 |
| 4272. Local charge 1 £/kVA/year at Linked location 1 | 2134 |
| 4274. Local charge 1 £/kVA/year at Linked location 6 | 2144 |
| 4276. Local charge 1 £/kVA/year at Linked location 2 | 2136 |
| 4278. Average local charge 1 (£/kVA/year) | 2180 |
| 4280. Import capacity charge p/kVA/day | 3908 |
| 4282. Import capacity charge from charge 1 (p/kVA/day) | 3914 |
| 4302. Total EDCM peak time consumption (kW) | 2602 |
| 4304. EHV operating expenditure intensity | 2004 |
| 4306. HV and LV service asset levels | 2014 |
| 4308. HV and LV service assets in CDCM model (£) | 3406 |
| 4310. EHV asset levels | 2010 |
| 4312. EHV assets in CDCM model (£) | 3402 |
| 4314. HV and LV network asset levels | 2012 |
| 4316. HV and LV network assets in CDCM model (£) | 3404 |
| 4318. Indirect cost charging rate | 3506 |
| 4320. Total demand sole use assets qualifying for DCP 189 discount (£) | 3704 |
| 4322. Network rates charging rate | 3504 |
| 4324. Capacity eligible for GSP generation credits (kW) adjusted for part-year | 2802 |
| 4326. Total CDCM peak time consumption (kW) | 2404 |
| 4328. Estimated total peak-time consumption (kW) | 2604 |
| 4330. Transmission exit charging rate (£/kW/year) | 2702 |
| 4332. Generation credit (unrounded) p/kVA/day | 2804 |
| 4334. Has export charges? | 2104 |
| 4336. Chargeable export capacity adjusted for part-year (kVA) (total) | 2202 |
| 4338. Non-exempt post-2010 export capacity (kVA) adjusted for part-year (total) | 2206 |
| 4340. Non-exempt 2005-2010 export capacity (kVA) adjusted for part-year (total) | 2204 |
| 4342. Export capacity charge p/kVA/day | 2208 |
| 4344. Export capacity charge (unrounded) p/kVA/day | 2806 |
| 4346. Net export capacity charge (or credit) (unrounded) (p/kVA/day) | 2810 |
| 4348. Export capacity rate (p/kVA/day) | 2812 |
| 4350. Direct cost charging rate | 3502 |
| 4352. Generation fixed charge p/day (scaled for part year) | 3606 |
| 4354. Generation credit (before exempt adjustment) p/kWh | 2184 |
| 4356. Generation credit (unrounded) p/kWh | 2186 |
| 4358. Export super-red unit rate (p/kWh) | 2188 |
| 4360. Net forecast EDCM generation revenue (£/year) | 3702 |
| 4362. Revenue less costs and adjustments (£/year) | 3706  (amended as described above) |
| 4364. Other revenue charging rate | 3802 |
| 4366. Demand revenue target pot (£/year) | 4008 |
| 4402. Direct costs on EDCM demand except through sole use asset charges (£/year) | 4004 |
| 4404. Indirect costs on EDCM demand (£/year) | 4002 |
| 4406. Number of super-red hours connected in year | 3916 |
| 4408. Revenue from demand charge 1 (£/year) | 4010 |
| 4410. Additional amount to be recovered (£/year) | 4012 |
| 4412. Network rates on EDCM demand except through sole use asset charges (£/year) | 4006 |
| 4414. Proportion of residual to go into fixed adder | 2006 |
| 4416. Residual residual (£/year) | 4014 |
| 4418. Network use factors (second set) | 4102 |
| 4420. Capacity 132kV/HV (£/kVA) | 4112 |
| 4422. Capacity EHV circuits (£/kVA) | 4108 |
| 4424. Capacity 132kV/EHV (£/kVA) | 4106 |
| 4426. Capacity EHV/HV (£/kVA) | 4110 |
| 4428. Capacity 132kV circuits (£/kVA) | 4104 |
| 4430. Second set of capacity assets (£/kVA) | 4114 |
| 4432. Consumption EHV circuits (£/kVA) | 4120 |
| 4434. Consumption 132kV/EHV (£/kVA) | 4118 |
| 4436. Consumption 132kV circuits (£/kVA) | 4116 |
| 4438. Second set of consumption assets (£/kVA) | 4122 |
| 4440. Non sole use notional assets subject to matching (£) | 4132 |
| 4442. Total non sole use notional assets subject to matching (£) | 4204 |
| 4444. Annual charge on assets | 4302 |
| 4446. Amount to be recovered from adders ex costs (£/year) | 4202 |
| 4448. Factor for the allocation of capacity scaling | 2008 |
| 4450. Marginal revenue effect of demand and indirect cost adders | 4402 |
| 4452. Total marginal revenue effect of demand adder | 4702 |
| 4454. Fixed adder ex indirects application rate | 4802 |
| 4456. Data for capacity-based allocation of indirect costs | 4404 |
| 4458. Total marginal effect of indirect cost adder | 4502 |
| 4460. Indirect costs application rate | 4602 |
| 4462. Capacity charge p/kVA/day (exit only) | 4126 |
| 4464. Import capacity charge before scaling (p/kVA/day) | 4130 |
| 4466. Capacity charge after applying indirect cost charge p/kVA/day | 4902 |
| 4468. Capacity charge after applying fixed adder ex indirects p/kVA/day | 4904 |
| 4470. Demand scaling p/kVA/day | 4906 |
| 4472. Total import capacity charge p/kVA/day | 4908 |
| 4474. Has import charges? | 3602 |
| 4476. Import demand charge p/kVA/day | 4124 |
| 4478. Super-red rate p/kWh | 4910 |
| 4480. Import capacity charge p/kVA/day | 4912 |
| 4482. Demand fixed charge p/day | 3604 |
| 4484. Adjustment to exceeded import capacity charge for DSM (p/kVA/day) | 4128 |
| 4486. Exceeded import capacity charge (p/kVA/day) | 4914 |
| 4488. Export capacity charge (p/kVA/day) | 2808 |
| 4490. Export fixed charge (unrounded) p/day | 3608 |
| 4492. Export fixed charge p/day | 3610 |
| 4501. EDCM charge | 5001–5009 |
| 4601. Horizontal information | 5101–5132 |
| 4602. Total for all tariffs (£/year) | 6101 |
| 6001. Applicable discount for each tariff | No change |
| 6002. LDNO discounted CDCM tariffs | No change |
| 6003. Net revenue from discounted LDNO tariffs (£/year) | No change |
| 6004. Total net revenue from discounted LDNO tariffs (£/year) | No change |
| 6005. LDNO discounted CDCM tariffs (reordered) | No change |
| 6101. Total EDCM revenue (£/year) | 6102 |

## Additional or modified outputs

* 1. There are no additional output data or changes to output data.

## Impact on the EDCM input data manual

* 1. The new DCP 216 model is no longer consistent with the EDCM input data manual of December 2012 produced by Reckon LLP for the ENA.