Appendix B Section IIIc – CO2 Load Shape Following Emission Rates for 1998 to 2002

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CO₂ Load Shape Following Emission Rate Profiles

Contour plots show emissions from 1MWh of load shape following generation in each hour of the year. Alternatively, this can be thought of as the emissions that would be avoided from applying 1MWh of non-emitting generation or demand side management in each hour of the year.

Below the contour plot is a chart that displays the average load shape following emission rate for the year and the total emissions from 8760 MWh of generation. That is, the total emissions from 1 MWh of load shape following generation in each hour of the year.

Five plots are shown for each subregion, one plot for each year from 1998 through 2002.



CO2 Load Shape Following Emission Rate – 1998 through 2002 NEWE (New England) – (365 days x 24 hours)

(t/8760MWh)

Figure BIIIc - 1. NEWE – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in NEWE (New England) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



CO2 Load Shape Following Emission Rate – 1998 through 2002 NYAS (New York) – (365 days x 24 hours)

Figure BIIIc - 2. NYAS – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in NYAS (New York) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



Figure BIIIc - 3. MAAC – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in MAAC (Mid-Atlantic) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



CO2 Load Shape Following Emission Rate – 1998 through 2002 ECOV (Ohio Valley) – (365 days x 24 hours)

Figure BIIIc - 4. ECOV – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in ECOV (Mid-Atlantic) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.

CO2 Load Shape Following Emission Rate – 1998 through 2002 ECMI (Michigan) – (365 days x 24 hours)



(t/8760MWh)

Figure BIIIc - 5. ECMI – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in ECMI (Michigan) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.

CO2 Load Shape Following Emission Rate – 1998 through 2002 SRVC (Virginia/Carolinas) – (365 days x 24 hours)



Figure BIIIc - 6. SRVC – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in SRVC (Virginia/Carolinas) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



CO2 Load Shape Following Emission Rate – 1998 through 2002

(t/8760MWh)

Figure BIIIc - 7. SRTV – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in SRTV (Tennessee Valley) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



jure Bille - 8. SRSO – CO2 Load Shape Following Emission Rate Prome

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in SRSO (Southeast) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



Figure BIIIc - 9. SRMV – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in SRMV (Mississippi Valley) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



Figure BIIIc - 10. FRCC – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in FRC (Florida) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



CO2 Load Shape Following Emission Rate – 1998 through 2002

Figure BIIIc - 11. MANN – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in MANN (Wisconsin) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



CO2 Load Shape Following Emission Rate – 1998 through 2002 MANS (Illinois) – (365 days x 24 hours)

Figure BIIIc - 12. MANS – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in MANS (Illinois) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.

SPNO (Kansas) – (365 days x 24 hours) Jan Jan Feb Feb CO2 (kg/MWh) Mar Mar 3000 Apr Apr May 2500 May Jun Jun 2000 Jul Jul 1500 Aug Aug 1000 Sep Sep Oct Oct 500 Nov Nov 0 Dec Dec 4 8 12 16 20 24 4 8 12 16 20 24 4 8 12 16 20 24 4 8 12 16 20 24 4 8 12 16 20 24 1998 1999 2000 2001 2002 Ave (kg/MWh) 936 948 934 933 946 Total 8196 8301 8312 8184 8170 (t/8760MWh)

CO2 Load Shape Following Emission Rate – 1998 through 2002

Figure BIIIc - 13. SPNO – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in SPNO (Kansas) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



Figure BIIIc - 14. SPSO – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in SPSO (Oklahoma) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



Figure BIIIc - 15. ERCT – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in ERCT (Texas) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.

CO2 Load Shape Following Emission Rate – 1998 through 2002 MAPP (Northern Plains) – (365 days x 24 hours)



Figure BIIIc - 16. MAPP – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in MAPP (Northern Plains) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.

CO2 Load Shape Following Emission Rate – 1998 through 2002 ROCK (Colorado) – (365 days x 24 hours)



Figure BIIIc - 17. ROCK – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in ROCK (Colorado) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



CO2 Load Shape Following Emission Rate – 1998 through 2002

Figure BIIIc - 18. NWGB – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in NWGB (Great Basin) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.

CO2 Load Shape Following Emission Rate – 1998 through 2002 NWPN (Pacific Northwest) – (365 days x 24 hours)



Figure BIIIc - 19. NWPN – CO2 Load Shape Following Emission Rate Profiles

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in NWPN (Pacific Northwest) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



Jure Bille - 20. WSSW - CO2 Load Shape Following Emission Rate Prom

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in WSSW (Southwest) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of the year (8760 MWh) and average yearly emission rates are shown below the profiles.



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the year (8760 MWh) and average yearly emission rates are shown below the profiles.

Contour plots show CO2 emissions (kg) from 1MWh of load shape following generation in each hour in CALI (California) for the years 1998 through 2002. Total emissions from 1MWh generated in each hour of