

## SCHEDULE 5 – AVERAGE INCREMENTAL COST

		Estimated Marginal Energy Costs (\$/MWh)				
		2019	2020	20201	2022	2023
Summer	<b>On Peak</b>	<b>26.41</b>	<b>25.31</b>	<b>24.97</b>	<b>23.61</b>	<b>23.52</b>
	Off Peak	15.79	14.96	14.94	14.22	14.20
	All Hours	22.87	21.86	21.63	20.48	20.41
Winter	<b>On Peak</b>	<b>27.01</b>	<b>26.04</b>	<b>25.16</b>	<b>24.52</b>	<b>24.49</b>
	Off Peak	18.74	18.27	17.68	17.30	17.40
	All Hours	24.25	23.45	22.67	22.11	22.13
Annual	<b>On Peak</b>	<b>26.71</b>	<b>25.68</b>	<b>25.06</b>	<b>24.06</b>	<b>24.00</b>
	Off Peak	17.26	16.62	16.31	15.76	15.80
	All Hours	23.56	22.66	22.15	21.30	21.27
Annual # hours on-peak:						

Description of season and on-peak and off-peak periods	
Summer:	April through September
Winter:	October through March
On-peak period:	6 am to 10 pm Monday through Friday except holiday (New Years, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day)
Off-peak period:	All other hours

### **Estimated Marginal Energy Costs**

The estimated system average incremental energy costs are calculated by seasonal peak and off-peak periods for each of the next five years. For each seasonal period, system incremental energy costs are averaged during system daily peak hours, system daily off-peak hours, and all hours in the season. The energy costs are increased by a factor equal to 50 percent of the line losses.

The energy needs of RPU are served through its membership in Southern Minnesota Municipal Power Agency (SMMPA). SMMPA, in turn, is a member of the Midcontinent ISO (MISO). As a result, the municipal's incremental energy cost is equivalent to the MISO hourly Locational Marginal Price (LMP). Actual hourly LMP will vary significantly based on several parameters such as weather, energy demand, and generation availability. The table above represents a forecast of the MISO hourly LMP values averaged over each specific time period at the MISO Minnesota Hub.

### **Capacity Costs**

SMMPA, RPU's wholesale supplier and RPU, have neither planned generating facility additions nor planned additional capacity purchases, other than from qualifying facilities, during the ensuing ten years, thus SMMPA and RPU are deemed to have no avoidable capacity costs.