

<b>Effective Date</b>	12/3/2019
<b>Impacted Manual #(s)/Manual Title(s):</b>	
Manual 15 Cost Development Guidelines	
<b>Conforming Order(s):</b>	
Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators (Issued February 15, 2018) Docket Nos. RM16-23-000; AD16-20-000; Order No. 841]	
<b>Associated Issue Tracking Title:</b>	Electric Storage Participation - FERC Order 841
<b>Committee Approval Path - What committee(s) have already seen these changes?</b>	
MIC 1 <sup>st</sup> Read: 6/12/19 MIC Endorsement: 7/10/19 MRC 1 <sup>st</sup> Read: 7/25/19 MRC Endorsement: 8/22/19 MC Endorsement: 9/28/19 Board Approval: October	
<b>MRC 1<sup>st</sup> read date:</b>	7/25/2019
<b>MRC voting date:</b>	8/22/2019
<b>Impacted Manual sections:</b>	
Section 7 (hydro) and Section 11 (batteries/flywheels) were modified in support of Order 841	
<b>Reason for change:</b>	
Compliance with FERC Order 841: Electric Storage Resource Participation model to allow ESRs to participate in all markets where technically feasible.	
<b>Summary of the changes:</b>	
<ul style="list-style-type: none"> <li>• Clarifying update on pumping cost equations in Section 7.3</li> <li>• Updates to define Efficiency Factor, Fuel Cost, VOM and Ancillary Service costs <ul style="list-style-type: none"> <li>• Efficiency factors measure the ratio of generation produced to the amount of electricity used to charge</li> <li>• Fuel cost using the average charging cost and defined in resource's FCP</li> <li>• Maintenance and Operating cost inclusion and exclusion guidelines and submitted in resource's VOM template</li> </ul> </li> </ul>	