

# Resource Tracking Model Updates and Trade Studies

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**The Resource tracking model has been updated to capture system manager and project manager inputs. Both the Trick/GUNNS RTM simulator and the RTM mass balance spreadsheet have been revised to address inputs from system managers and to refine the way mass balance is illustrated. The revisions to the RTM included addition of a Plasma Pyrolysis Assembly (PPA) to recover hydrogen from Sabatier reactor methane which was vented in the prior version of the RTM. The effect of the PPA on the overall balance of resources in an exploration vehicle is illustrated in the increased recycle of vehicle oxygen. Additionally simulation of EVAs conducted from the exploration module was added. Since the focus of the exploration module is to provide a habitat during deep space operations the EVA simulation approach to EVA is based on ISS EVA protocol and processes. Case studies have been run to show the relative effect of performance changes on vehicle resources.**

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