Kerbal Space Program - Feedback #17210

Crucial anti-frustration parts come too late in the tech tree

02/02/2018 07:47 PM - Nebbie

Status:	New		
Severity:	Low		
Assignee:			
Category:	Gameplay		
Target version:			
Version:	1.3.1	**Language:**	English (US)
Platform:	Linux, OSX, Windows	**Mod Related:**	No
Expansion:			

Description

So, say we're doing a campaign on normal difficulty to go to the Mun (and come home safely) in this decade and do the other things. What do we need for the mission?
Let's assume we're sending 1 Kerbal without docking, because docking is hard and multiple Kerbals get expensive. Furthermore, we're a player who isn't Scott Manley and can't land on the engines. Simple there and back without a rover, so we need:

1. Basic 1.25m rocket stuff, so we can actually stage etc.
2. Basic crew return package (heatshield/parachutes on a pod)
3. Landing legs
4. Science to do while there
5. Electricity for the whole trip

Okay, so the first four are trivial. We really just need Survivability and Advanced Rocketry and all their prerequisites. My first issue is #5: IRL, they had basically fuel cells, simple batteries, and an RTG. We probably don't *really* need an RTG which is at the very end of the tech tree, but we certainly at least need batteries, and we'd want fuel cells.
To get batteries, we need Basic Science, which is really pushing the limits of the science that can be done before landing on the Mun. We could send a probe first, but that requires Basic Science too and just saves us Advanced Rocketry.
Now the real kicker: the batteries are tiny, and we'd like to not lose the parity of having fuel cells on our little Apollo...but they're in High Power Electrics, which is way, way past what you can reasonably get to before a Mun landing. By the time fuel cells are an option, we're probably able to easily get a Kerbal to *Duna*. We could use solar panels, but they're in Electrics, which is still probably past the science a reasonable player can scrape up before going to the Mun.
So, to get *reasonable* electricity for the trip we probably need to land a probe on the Mun that has no way to get power besides batteries, but transmission takes a *lot* of energy. Ultimately, what ends up happening in my campaigns is I send a Kerbal with a few batteries and rush the mission so they don't run out of power that can only last a day. For a much newer player, this could become a serious issue as they'll run out of power too fast from trying to transmit some science right away or spending too long with SAS on in space. Anyone who tries a probe first is, sadly, making it even worse on themselves despite taking what should be the more reasonable approach.

Similarly, try to send a rover anywhere. Just a simple wheeled probe. It needs a body and wheels. Wheels were thankfully moved to Space Exploration from a further node a while back, but the RoveMate is over in *Field Science*. What are we supposed to put the wheels on? By the time we get that probe body, we could just put Kerbals on Duna...

Anyways, I think that with Making History on the way, it would be good to make the progression of the existing parts a little saner in 1.4 so that doing realistic progression is less troublesome.

History

#1 - 02/02/2018 08:08 PM - Nebbie

Also, the changes I recommend are:

1. Move OX-STAT Photovoltaic Panels from Electrics to Basic Science
2. Move Fuel Cells from High Power Electrics to Electrics
3. Move Fuel Cell Array from Specialized Electrics to High Power Electrics
4. Merge Specialized Electrics into Experimental Electrics (and call it Experimental Electrics)
5. Move Probodobodyne RoveMate from Field Science to Precision Engineering
6. Move EAS-1 External Command Seat from Field Science to Advanced Exploration
7. Merge Advanced Motors into Field Science (and call it Advanced Motors)

#2 - 03/07/2018 06:12 PM - Ruedii

I'd recommend adding a low power fuel cell that only has equivalent power to the small surface mount solar panel.

It should also be substantially less fuel efficient than it's high power cousin (although a part upgrade might be in order for in the tech tree to fix this issue.)