



Lee Mason  
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1  
00:00:00,580 --> 00:00:01,580  
Hi!

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00:00:01,580 --> 00:00:14,580  
I'm Lee Mason I'm a power system engineer  
at the NASA Glen Research Center.

3  
00:00:14,580 --> 00:00:20,560  
I work on power systems for space applications  
and one of the systems is sitting next to

4  
00:00:20,560 --> 00:00:23,869  
me it's called a Radioisotope Thermoelectric  
Generator.

5  
00:00:23,869 --> 00:00:27,400  
It uses nuclear heat to produce electricity.

6  
00:00:27,400 --> 00:00:32,439  
And in fact, it's already in use on Mars,  
powering the Mars Curiosity Rover.

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00:00:32,439 --> 00:00:37,110  
This power system probably wouldn't be big  
enough to sustain a human colony on the surface

8  
00:00:37,110 --> 00:00:41,300  
of Mars, but it works very well for a Rover  
application.

9  
00:00:41,300 --> 00:00:46,040  
If you go beyond that, you might consider  
a power system like you see behind me; this

10  
00:00:46,040 --> 00:00:48,740  
system produces forty-thousand watts.

11  
00:00:48,740 --> 00:00:54,460  
That's enough to power to power 8 homes

here on earth, or a Mars base, that might

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00:00:54,460 --> 00:00:56,190

have 6 or 8 astronauts.

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00:00:56,190 --> 00:01:01,050

A system like this could be developed and delivered to the Martian surface where it

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00:01:01,050 --> 00:01:07,550

could provide electricity to run their oxygen plants it could provide electricity to make

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00:01:07,550 --> 00:01:13,190

propellant, locally there on the Mars surface and it could provide the electricity to run

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00:01:13,190 --> 00:01:14,800

their science experiments.

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00:01:14,800 --> 00:01:19,780

This system is one that we've been working on for several years here at NASA Glenn and