
NASA

1
00:00:00,510 --> 00:00:04,650
Bob Cabana/NASA's Kennedy Space Center Director: One, two, three?

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00:00:04,650 --> 00:00:10,180
Narrator: NASA?s Kennedy Space Center rang in 2011 with the grand opening of the agency?s greenest facilit

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00:00:10,180 --> 00:00:16,580
on January 20. The Propellants North Administrative and Maintenance Facility is the new hub for fueling suppo

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00:00:16,580 --> 00:00:22,610
personnel and a storage facility for cryogenic fuel transfer equipment for spacecraft that will embark on journey

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00:00:22,610 --> 00:00:28,100
to unlock the mysteries of the universe? while the building itself taps into Earth's natural resources.

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00:00:28,100 --> 00:00:30,640
Bob Cabana/NASA's Kennedy Space Center Director: How can you not be enthused about something that

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00:00:30,640 --> 00:00:36,890
requires zero energy? I think it's fantastic. It actually puts more energy out than it requires to run in a

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00:00:36,890 --> 00:00:41,660
24-hour period. This is our start. This is setting the standard.

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00:00:41,660 --> 00:00:47,120
Narrator: A few days before the ribbon cutting ceremony, we caught up with Frank Kline, a project manager wit

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00:00:47,120 --> 00:00:52,790
NASA Construction of Facilities, to talk about how Propellants North will be a test bed for more environmentally

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00:00:52,790 --> 00:00:54,380
friendly projects.

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00:00:54,380 --> 00:00:56,240
Project Manager Frank Kline/NASA Construction of Facilities: Honestly, I feel this is probably one of the best

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00:00:56,240 --> 00:01:02,420

facilities we have in the agency and nationwide. There's not many buildings that can meet the same criteria tha

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00:01:02,420 --> 00:01:06,710
we met here. This facility is going to give NASA the data to prove that these things do what the vendors actuall

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00:01:06,710 --> 00:01:12,110
say they do. So that's what we're doing in this building. We're checking what the vendors tell us is truly green t

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00:01:12,110 --> 00:01:13,800
make sure it meets what they're saying.

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00:01:13,800 --> 00:01:19,920
Narrator: The test bed begins with a parking lot of the future. For less than $1.50 a day, an electric or hybrid

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00:01:19,920 --> 00:01:23,970
vehicle can plug into this nearby solar-powered charging canopy.

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00:01:23,970 --> 00:01:26,720
Project Manager Frank Kline/NASA Construction of Facilities: This right here will give, will hopefully give folks a

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00:01:26,720 --> 00:01:29,460
incentive to buy electric cars and have a place to plug in.

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00:01:29,460 --> 00:01:36,670
Narrator: The eight-car station can be used for government or personal vehicles to reduce dependency on gas

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00:01:36,670 --> 00:01:43,090
Using the sun?s power doesn't stop outside, either. More than 300 photovoltaic panels are expected to produc

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00:01:43,090 --> 00:01:50,030
more energy than will be used at Propellants North, making it the space agency's first net-zero facility. Even th

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00:01:50,030 --> 00:01:55,960
orientation of the building on the property maximizes sunlight, decreasing the demand for energy.

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00:01:55,960 --> 00:01:58,350
Project Manager Frank Kline/NASA Construction of Facilities: The whole system was designed and constructe

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00:01:58,350 --> 00:02:05,760
NASA with very little outside help. So we, I take a lot of pride in that. The system works really well.

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00:02:05,760 --> 00:02:09,770
We've had experts come in and give us kudos on how well the system is actually functioning.

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00:02:09,770 --> 00:02:16,920
Narrator: Net-zero also includes water conservation. A 7,500-gallon rainwater harvesting system supplies H2O

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00:02:16,920 --> 00:02:22,350
the toilets and sprinklers. When treated, that same water is safe for drinking and hand washing.

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00:02:22,350 --> 00:02:31,110
Revered as American icons, NASA?s spaceflight history adorns the walls. Other artwork brightly contrasts the

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00:02:31,110 --> 00:02:37,760
power of spacecraft propellants and the peace of the raw nature and wildlife that exists in harmony at Kennedy

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00:02:37,760 --> 00:02:44,290
While most of its features are brand-new, Propellants North also is steeped in rich history. Outside, crawlerway

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00:02:44,290 --> 00:02:49,580
rocks that were crushed during space shuttle treks to Kennedy's launch pads are used as a substitute for mulc

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00:02:49,580 --> 00:02:54,100
Inside, a striking piece of Kennedy history is prominently displayed in the lobby.

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00:02:54,100 --> 00:02:57,080
Project Manager Frank Kline/NASA Construction of Facilities: We're actually looking at the recovered LCC glaz

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00:02:57,080 --> 00:03:02,420
and framing that we saved out of the Launch Control Center. To me, this is the million dollar view from this faci

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00:03:02,420 --> 00:03:10,170
You have the same view as you did, looking out in 1964 from the Launch Control Center, set at the same angle

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00:03:10,170 --> 00:03:12,030

orientation as in the firing rooms.

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00:03:12,030 --> 00:03:17,660
Narrator: Kline and his team even insisted that the windows be left in their original state with the salt air stains

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00:03:17,660 --> 00:03:24,520
the outside and a nicotine patina on the inside from when NASA allowed smoking in the firing rooms. Propellan

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00:03:24,520 --> 00:03:27,370
North also is an uber-smart facility.

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00:03:27,370 --> 00:03:30,220
Project Manager Frank Kline/NASA Construction of Facilities: These two switches are part of the automated lig

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00:03:30,220 --> 00:03:35,620
control system for this room. As you notice, there's really high windows. So we get a lot of daylight into this faci

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00:03:35,620 --> 00:03:37,590
especially the second floor.

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00:03:37,590 --> 00:03:43,050
Narrator: Even the air-conditioning system is pretty clever. Its efficiency comes from the highly insulated roof a

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00:03:43,050 --> 00:03:49,690
walls as well as a thermostat that regulates the temperature and relative humidity up to 5 feet above the groun

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00:03:49,690 --> 00:03:51,710
which is where most people spend their time.

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00:03:51,710 --> 00:03:53,830
Project Manager Frank Kline/NASA Construction of Facilities: This system works from the ground up. Hot air

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00:03:53,830 --> 00:03:58,010
rises, so the air conditioning here starts from the floor and goes up. Kind of the opposite from what a normal

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00:03:58,010 --> 00:04:00,740
facility would be? pushing cold air down.

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00:04:00,740 --> 00:04:06,470
Narrator: The system requires no duct work, because the air flows underneath the facility's sustainable bamboo

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00:04:06,470 --> 00:04:12,560
flooring. Vents in each work station can even be relocated for the comfort of the occupants.

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00:04:12,560 --> 00:04:15,300
Propellants North is using an energy-saving feature that could

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00:04:15,300 --> 00:04:21,050
be added to existing Kennedy facilities in the near future. Called a controlled power station, when an occupant

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00:04:21,050 --> 00:04:27,260
leaves their work area for an extended period of time, it will turn everything using electricity off except their

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00:04:27,260 --> 00:04:33,920
computer. This small step could greatly reduce an existing facility's monthly power bill. The design team's atten

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00:04:33,920 --> 00:04:40,680
to energy-efficient detail didn't escape the restrooms. Hygienic hand dryers blast water from hands in seconds

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00:04:40,680 --> 00:04:46,420
much like a power dryer at a car wash. And the showers and sinks are made to conserve as well.

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00:04:46,420 --> 00:04:49,500
Project Manager Frank Kline/NASA Construction of Facilities: All the fixtures are high-efficiency fixtures and

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00:04:49,500 --> 00:04:55,120
they're all automated, so you don't have to touch them? they are touchless. And they're super-low flow, so you

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00:04:55,120 --> 00:04:56,440
use very little water.

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00:04:56,440 --> 00:05:00,980
Narrator: While Propellants North will be working for its occupants, its occupants will need to develop a green

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00:05:00,980 --> 00:05:06,110

thumb of their own to maintain the center's reuse, recycle and repurpose efforts.

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00:05:06,110 --> 00:05:08,560
Project Manager Frank Kline/NASA Construction of Facilities: As you can see, we have bins for plastic, alumin

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00:05:08,560 --> 00:05:14,960
cans, white paper, cardboard. The whole idea is to change people's habits to not throw things away.

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00:05:14,960 --> 00:05:21,560
We can recycle most things nowadays. So, we try to reduce what ends up in the landfill.

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00:05:21,560 --> 00:05:26,250
Narrator: The construction crew had the same concept in mind throughout the year-and-a-half building phase.

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00:05:26,250 --> 00:05:34,200
To date, 98 percent of all waste, totaling 664 tons, was diverted from landfill disposal. The environmentally

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00:05:34,200 --> 00:05:41,840
friendly, net-zero energy, water conserving, super clean and super smart building is a cost-saving step toward

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00:05:41,840 --> 00:05:45,050
future? and is part of a bigger picture for NASA.

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00:05:45,050 --> 00:05:48,830
Mike Benik/Kennedy Center of Operations Director: An agencywide focus on green initiatives has resulted in

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00:05:48,830 --> 00:05:55,140
implementing ways to produce renewable energy, conserving energy and water, and utilizing environmentally

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00:05:55,140 --> 00:05:56,760
friendly materials.

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00:05:56,760 --> 00:05:59,420
Bob Cabana/NASA's Kennedy Space Center Director: I think it's the future for us here at the Kennedy Space