Deseret Power Railroad

Coordinates: 40.363°N 109.357°W

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The **Deseret Power Railroad** (/dɛz.ə'rɛt./[1]), formerly known as the *Deseret-Western Railway*,[2] is a private railroad operating in northeastern Utah and northwestern Colorado.

It is owned by the Deseret Generation & Transmission Co-operative, and exists to transport coal from the co-operative's Deserado Coal Mine (northeast of Rangely, Colorado; south of Dinosaur, Colorado) to their Bonanza Power Plant (northwest of Bonanza, Utah). The length of the railway is about 35 miles.

The railroad is electrified, using an overhead catenary system energized at 50 kV 60 Hz AC to supply power to its locomotives. Motive power includes 7 General Electric E60-2 locomotives, two of which were built for the Deseret, and five which were acquired secondhand from the Ferrocarriles Nacionales de México (FNM). The five FNM units were converted from their original 25 kV power supply to take the Deseret's 50 kV.

The Deseret Power Railroad does not interchange with any other railroad and is completely isolated from the national rail network. It was built in 1984.

References

1. ^ LDS.org: "Book of Mormon Pronunciation Guide" (http://www.lds.org/scriptures/bofm/pronunciation?lang=eng) (retrieved 2012-02-25), IPA-ified from «děz-a-rĕt´»
2. ^ "Deseret Western Railway - Deseret Power Railroad" (http://utahrails.net/utahrails/deseret-western.php). *utahrails.net*. Retrieved 17 February 2011.

External links

- UtahRails.net - Deseret Western Railway (http://utahrails.net/utahrails/deseret-western.php)

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Deseret Western Railway
Deseret Power Railroad

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The Deseret Western Railway (now known as the Deseret Power Railroad) is an electrical loop-to-loop railroad that ships the coal quickly and efficiently over the 35 mile stretch from the mine to the power plant. Shipping the coal via electric locomotive is not only cheaper than other forms of transportation, it is also far more cost-effective.

Overview

From *Railfan & Railroad*, January 1984, page 30:

> DESERET-WESTERN RAILWAY Colorado's newest electric railroad nearly lost one of its new electric locomotives before it ever reached home rails. Western Fuels Utah is developing the Deserado underground coal mine in Rio Blanco County ten miles northeast of Rangely, Colorado, to feed the 400-megawatt power station being built by the Deseret Generation & Transmission Association at Bonanza, Utah. The coal will travel by 2.5-mile conveyor from the mine to the railhead of the Deseret-Western Railway, a totally new 33-mile electrified railroad built in 1983 by Railroad Builders of Englewood, Colorado. Like the Black Mesa & Lake Powell in Arizona, the D-WR does not connect with any other railroad.
>
> Two E60 freight locomotives were built by GE, numbered WFU-1 and WFU-2, and shipped in August via N&W and D&RGW to Rifle, Colo., where they were loaded aboard highway trailers for the 90-mile trek northwest to the railroad. On September 20, 1983, 16 miles west of Meeker, Colo., on Highway 64, the movers nearly lost one of the locomotives. They were concerned that the White River bridge might not hold the combined weight of tractor, trailer and locomotive, so it was decided to drive the tractor across and let the trailer and locomotive coast slowly across the sloping bridge using the trailer's air brakes for control. However, as the trailer crossed, a hose on the air brakes burst and the trailer veered into the bridge railing, coming to rest with the locomotive tilted downward at the end of the bridge 20 feet above the water. Cranes were brought in to rescue the E60, and the second engine made it across without incident.
>
> About 40 hoppers are expected to arrive by October, with train operations to begin in November 1983. Coal will be hauled to the plant for stockpiling, as the plant will not go on line until 1985. All encounters between the D-WR and roads are handled on overpasses or underpasses; there are no grade crossings on the line. Bad news for railfans is that the trains are expected to run at night, when the demand for electricity will be down. *(Chip Sherman)*

Timeline

September 1983
Locomotives arrive via rail at Rifle, Colorado, on D&RGW.

January 4, 1984
Deseret Western Railway began operations on January 4, 1984. First full 35-car train ran on January 6, 1984. Railroad is 35 miles long and uses 50kv. Built during the summer of 1983 by Railroad Builders of Englewood, Colorado. *(CTC Board, January 1984, page 3)*

Spring 1984
Operations began, moving coal for stockpiling at the Bonanza power plant, which did not start production until 1985.

December 1990
Deseret-Western Railway currently runs a two-unit 35-car train twice daily. There were plans to finalize a contract with Los Angeles Public Power in the near future, doubling the power plant's power generation. This increase would require the acquisition of two additional E60C locomotives and 40 additional cars; train frequency would be increased to three times daily using four units and 75 cars. *(CTC Board, December 1990, reported by Blair Kooistra)*

October 1996
The WFU on the two locomotives numberboards (WFU-1 and WFU-2) denoted Western Fuels Utah, a joint company owned by Deseret Generation & Transmission Cooperative (90 percent) and Western Fuels Association (10 percent), itself a cooperative of city-owned and rural electric utilities. In October 1996 Deseret bought out Western's 10 percent interest and changed the name to Blue Mountain Energy, Inc.

Deseret Western Railway was owned and operated by WFU, which went away in October 1996. There is a BLM document concerning Blue Mountain's payment of rental fees on several rights-of-way, including the 35-mile rail line which they argued was merely an extension of the Bonanza power plant.

September 1, 2001
The name of the Deseret Western Railway was changed to Deseret Power Railroad at the same time as the parent company's name changed from Deseret Generation & Transmission Cooperative to Deseret Power Cooperative. *(Deseret News, August 16, 2001; September 2, 2001)*

Deseret Power Railroad purchased two former NdeM locomotives at about the same time as the parent company changed it name. The exact date of arrival is unknown, but they were on the railroad by November 2001.

February 2003
Deseret Power Railroad received 24 new aluminum Johnstown America "Autoflood III" coal cars. Numbered as DPR 56-79, the cars were delivered via Union Pacific to Craig, Colorado, where the railroad's owner, Blue Mountain Energy, then moved them by truck over highways to the Deserado mine at the eastern terminus of the captive 35-mile railroad between the Deserado coal mine in Colorado and the Bonanza power plant in Utah. *(Trainorders.com, February 20, 2003)*

Locomotives

Based in part on information from The Diesel Shop

GE E60C — 7 units
6000 horsepower; C-C trucks; (??) pounds operating weight

Road Number	*Previous Number*	*Builder Number*	*Date Built*	*Date To DWR*
DPR-1	WFU-1	43146	Aug 1983	
DPR-2	WFU-2	43147	Aug 1983	
EA012	NdeM EA012	44039	Aug 1983	Oct 2004
EA017	NdeM EA017	44044	1983	Oct 2004
EA028	NdeM EA012	44055	1983	Oct 2004
EA031	NdeM EA031	44058	Sep 1983	bef Nov 2001
EA035	NdeM EA035	44063	Dec 1983	bef Nov 2001

General Notes:

a. Deseret Western Railway was built and owned by Western Fuels Utah (WFU), which itself was a joint operation of Western Fuels Association and Deseret Generation and Transmission Co-operative. In 1996, Western Fuels Association sold its 10 percent interest to Deseret, at which time Deseret formed a new subsidiary called Blue Mountain Energy, Inc., to operate the Deserado mine and transport the coal to the power plant.

b. Name changed to Deseret Power Railroad in September 2001. *(photos dated as late as 2003 show the former WFU road numbers and original Deseret Western Railway name)*

c. The first two former NdeM units (EA031 and EA035) arrived on Deseret Western before November 2001; by then some sources were saying that the railroad had been changed to Blue Mountain Mining Co.

d. Three additioanl former NdeM units had been stored at Merced, Texas, but upon being sold to DWR (in ??), were moved to Denver, Colo., on October 13, 2004. That evening, the units were moved by UP west to Phippsburg and then on Craig sometime later in the week. From Craig, the units were placed on trucks to be hauled further west to the Deseret Western's shops. The new units were to be used to power longer trains, or additional trains, in support of a new 110 megawatt power plant being started in 2004, adjacent to the existing 400 megawatt plant at Bonanza.

e. All five former NdeM units retain their original NdeM paint schemes and numbers; they were converted from NdeM's 25Kv system to Deseret's 50Kv system.

Bonanza Power Project

- Deseret Generation and Transmission Co-Operative
- Western Fuels Utah (later Blue Mountain Energy)
- Bonanza Power Unit

Deseret Generation and Transmission Co-Operative is a cooperative that provides wholesale electric generation and transmission services to its six member rural electrical cooperatives who, in turn, provide retail electric services to their members/owners in the States of Utah, Wyoming, Arizona, Colorado, and Nevada. The main offices of Deseret Generation and Transmission Co-Operative, are located in Sandy, Utah.

The cooperative is owned jointly by six rural utilities: Bridger Valley Electric, Garkane Energy, Mt. Wheeler Power, Moon Lake Electric, Flowell Electric and Dixie Escalante Rural Electric Association, and serves over 41,000 customers in Utah, Wyoming, Nevada, Colorado, and Arizona. Deseret also provides power to the Utah Municipal Power Agency and several Utah municipal power companies.

In addition to the Bonanza Power Plant, Deseret operates the Deserado coal mine through a subsidiary company and is based in South Jordan, Utah.

The Bonanza Power Project was designed in the late 1970s and early 1980s to serve an anticipated burgeoning electric load spurred by the new oil shale industry in western

Colorado and eastern Utah. The power plant was to consist of two units, and, when the second unit was running, 2.5 million tons of coal would be consumed each year. When the anticipated increase in demand did not materialize due to the collapse of the projected oil-shale boom, only one generation unit was placed on line.

Primary financing for the Bonanza Power Project was provided in 1981 by a $900 million loan to Deseret Generation and Transmission Cooperative, guaranteed by the Rural Electrification Administration, an agency of the U.S. Department of Agriculture. Components of the Bonanza Power Project include the Deserado coal mine, an coal transportataion system that includes an electrified railroad, and the Bonanza Power Unit, a coal-fired electrical generation facility located in eastern Utah near the city of Vernal, and related electrical transmission facilities. All components are owned and operated by Deseret, a nonprofit generation and transmission cooperative which supplies power to six rural electrification associations serving consumers in six states.

Deserado Mine

The Deserado Mine was owned and operated by Western Fuels Utah, then later by Blue Mountain Energy, Inc. The mine is an underground coal mine located on public lands under Federal coal lease in northwestern Colorado, in Rio Blanco County. It mines coal using the longwall method and transports coal out of the longwall section on a conveyor belt.

The mine is made up of nearly five miles of underground chambers organized into a giant grid pattern similar to city blocks. At the heart of the mine is the longwall mining system. This system is recognized as the most advanced and economical method of extracting enormous amounts of coal in a short time. Powered by electricity generated by the coal it mines, the longwall system can deliver over 7,000 tons of coal a day.

Once the coal reaches the surface, it is washed and stored. When needed, the coal is placed on a three-mile long conveyer belt and transported to a railhead for shipment by way of a 35-mile railroad to the Bonanza Power Unit.

Western Fuels Utah, Inc., was a joint operation of Deseret (90 percent) and Western Fuels Association (10 percent). Western Fuels Utah was organized to supply coal to Deseret's Bonanza Power Unit, located near Bonanza, Utah. Western Fuels Association, Inc., was a nonprofit cooperative which supplied fuel to its membership of 13 rural electric cooperatives and 22 public bodies operating electric utility systems.

Western Fuels Utah was formed for the sole purpose of developing and operating the Deserado Mine, part of an integrated electric power project which includes the mine itself, an overland conveyor belt for transportation of coal, a railroad transportation system, and the Bonanza Power Unit. All production from the mine is sold to the Bonanza Power Unit, a coal-fired electrical generation facility in eastern Utah.

On October 28, 1981, Deseret and Western Fuels Utah entered into an agreement in which Deseret paid Western Fuels Utah for coal at the cost of production and transportation. The agreement included funding for the development of the mine and construction of the railroad.

With the collapse of the oil shale boom, and the drastic downturn in coal needs by 1983, the Deserado Mine could not be operated at the projected rate of return. The reduction to a one unit plant had a similar impact on Western Fuels Utah's operations. When designed for the two-unit plant, the anticipated capital costs were amortized over a significantly larger tonnage of coal. When the increase in demand did not materialize, the mine had to be replanned to serve the one-unit operation at the Bonanza Plant, with a per-ton cost at least 20 percent higher than that projected for a two-unit operation.

From the time of its initial planning and operation, the Deserado Mine and its associated facilities have been closely tied to Deseret's Bonanza Power Plant. Deseret has been Deserado's only customer. The Bonanza Power Unit was designed in every detail to burn coal only from Deserado. Even the location of the Bonanza Power plant was in large part determined by the location of the Deserado Mine. Bonanza and Deserado were built at the same time, and the financing for both projects came from guarnteed government loans made directly to Deseret. These loans were made to Deseret and part of the funds were then loaned to Western Fuels Utah to develop the coal mine and build the railroad.

In a story dated March 6, 1986, the New York Times wrote:

> The National Cooperative Services Corporation yesterday announced plans to sell nearly $359 million of bonds as part of a sale and leaseback transaction involving a new electric generating plant leased by the Deseret Generation and Transmission Cooperative.
>
> According to an official at Salomon Brothers Inc., which is handling the bond sale, the financing for the new Bonanza power plant in Vernal, Utah, is the largest leasing transaction ever arranged for a single facility.
>
> The General Electric Credit Corporation and the Shell Oil Company are the equity owners of the power plant, which has been leased to Deseret for 25 years.
>
> Proceeds of the bonds, which are expected to mature in 5, 10, and 25 years, will repay a loan from the National Rural Utilities Cooperative Finance Corporation, of which Deseret is a member. The bonds are guaranteed by the finance corporation, although Deseret's lease payments are expected to cover the debt service.

In October 1996, Deseret bought the outstanding 10 percent interest of Western Fuels in the jointly owned Western Fuels Utah, and changed the Western Fuels Utah name to Blue Mountain Energy, Inc., as a wholly-owned subsidiary of Deseret. Western Fuels' operation of the Deserado mine was turned over to Blue Mountain Energy on October 16, 1996, at the same time that a loan from Rural Utilities Service (RUS), formerly the Rural Electrification Administration (REA) went into effect.

The Blue Mountain name appears to have been taken from a nearby small town by the same name, located on U. S. 40, 7.5 miles northwest of the mine, and from a 8400 feet high mountain of the same name, located an additional five miles in the same direction.

Approximately 4,791 tons of coal was produced daily from the "D" seam, which was 8.5 feet thick. The underground mine produced 769,000 tons of coal in 1995. In January 1996, a mine fire occurred on the active longwall section that caused the longwall and two development sections to be sealed. This mining equipment was later abandoned. Since the fire, coal has been produced from two to three continuous mining machine sections with two sections developing new longwall panels and a third developing a pillar mining section.

The mine operates four days a week, ten hours per shift, producing coal on two shifts with the remaining time available for maintenance. Coal preparation was scheduled only on the day shift, beginning at 6:00 a.m.

The January 1996 mine fire resulted in a production stoppage. To maintain an adequate supply of coal for the power plant, the company purchased coal from another mine and trucks operated by Hyland Enterprises, Inc., delivered it to the railroad loadout facility.

In June 2001, Deseret Generation and Transmission Corp. announced that it was is looking at building an 80-megawatt plant next to the company's Deserado Coal Mine outside Rangely or 35 miles southwest of Rangely next to the company's existing coal-fired power plant at Bonanza, Utah.

In 2004, Deseret began construction of a new 110 megawatt power plant, adjacent to its existing power plat at Bonanza, Utah.

Bonanza Power Plant

The Bonanza power plant is the heart of the Deseret operation. This 460-megawatt coal-fired unit is ranked among the cleanest and most environmentally safe coal-fired power plants in the world. Bonanza began operating in 1985 and quickly became one of the most efficient units in the region. To assure availability, Deseret completely overhauled the turbine/generator in 2000 and installed a new higher efficiency turbine rotor and three new coal pulverizers.

In addition to the Bonanza Power Plant, Deseret also owns 25 percent of Utah Power's Hunter II plant. This additional power source ensures that Deseret can meet its customer's increasing energy needs, as well as provide a continued to power source during upgrades and improvements to the Bonanza plant.

From the Bonanza Power Plant to their six member cooperatives, Deseret owns and maintains over 287 miles of transmission lines, that carry over 300 megawatts of power to over 40,000 consumers in six states.

Other Projects

Proposed Isolated Empire Railroad Project — In October 2000 there was a lot of discussion of a proposed railroad that would connect the Deseret Western Railroad to Rifle, Colorado, in order to move as much as 10 million tons per year of processed phophate products from deposits in eastern Utah. *(No further action was taken after the initial surge of publicity in 2000.)*

More Information

- Photos at ColoradoRailfan.com
- Uintah II — An article by Warren Kiefer, published in National Railway Bulletin

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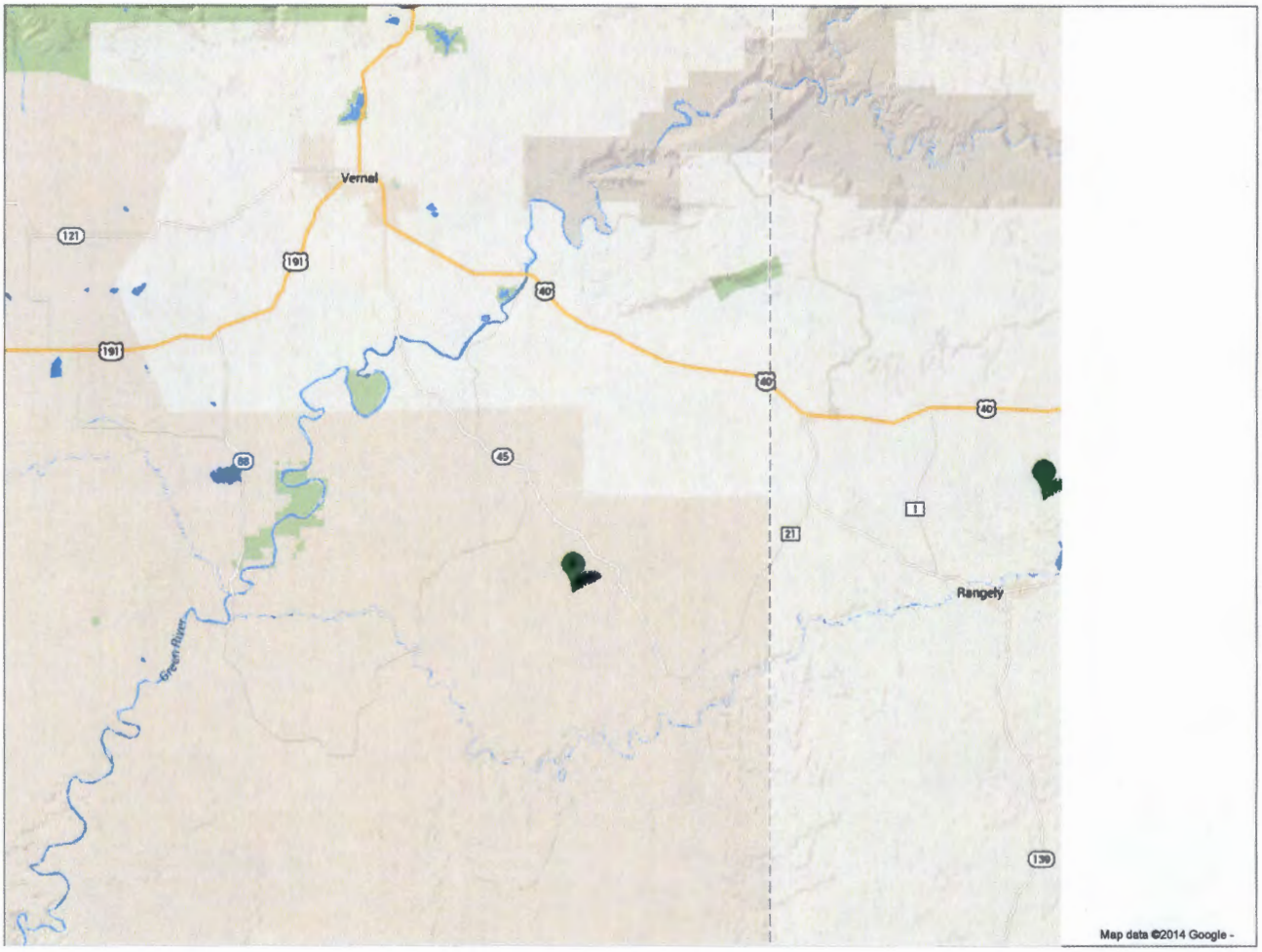

Driving directions to 3607 County Road 65, Rangely, CO 81648

Deseret Power, 12500 E 25500 S, Vernal, UT 84078

1. Head **west** on **E 25500 S**	0.7 mi
2. Turn right toward **S Deseret Power Plant Rd E**	0.6 mi
3. Continue onto **S Deseret Power Plant Rd E**	3.0 mi
4. Turn right onto **UT-45 S**	10.2 mi
5. Turn left toward **County Rd 3460**	9.3 mi
6. Continue onto **County Rd 3460**	1.1 mi
7. Continue onto **Co Rd 21** Entering Colorado	4.9 mi
8. Turn right onto **CO-64 E**	21.4 mi
9. Turn left onto **Co Rd 65**	3.3 mi
10. Turn left	1.2 mi

3607 County Road 65, Rangely, CO 81648

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

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