

## Come and visit us at Chena Hot Springs Resort ...

viewing excursions, fishing, canoeing, hiking and many snowmobiling, horseback riding, 4-wheeler rides, aurora extensive onsite activities. These include dog mushing, However, Chena is primarily a recreational property, and as have several banquet rooms, conference facilities, and such we maintain excellent resort and hotel facilities. We promote renewable energy and sustainable development Chena Hot Springs Resort is very proud of our efforts to



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groups accommodate needs of larger special events. We have several large festival tents (up to 150ft long) available to retreats, weddings, and other Chena has experience hosting business and board

communications at many locations around the property. Please consider booking our facilities for your next event or Chena has free high speed wireless access available for

Springs Road. We offer shuttle service from town for guests Fairbanks, Alaska in interior Alaska at the end of Chena Hot Chena Hot Springs Resort is located 56 miles northeast of

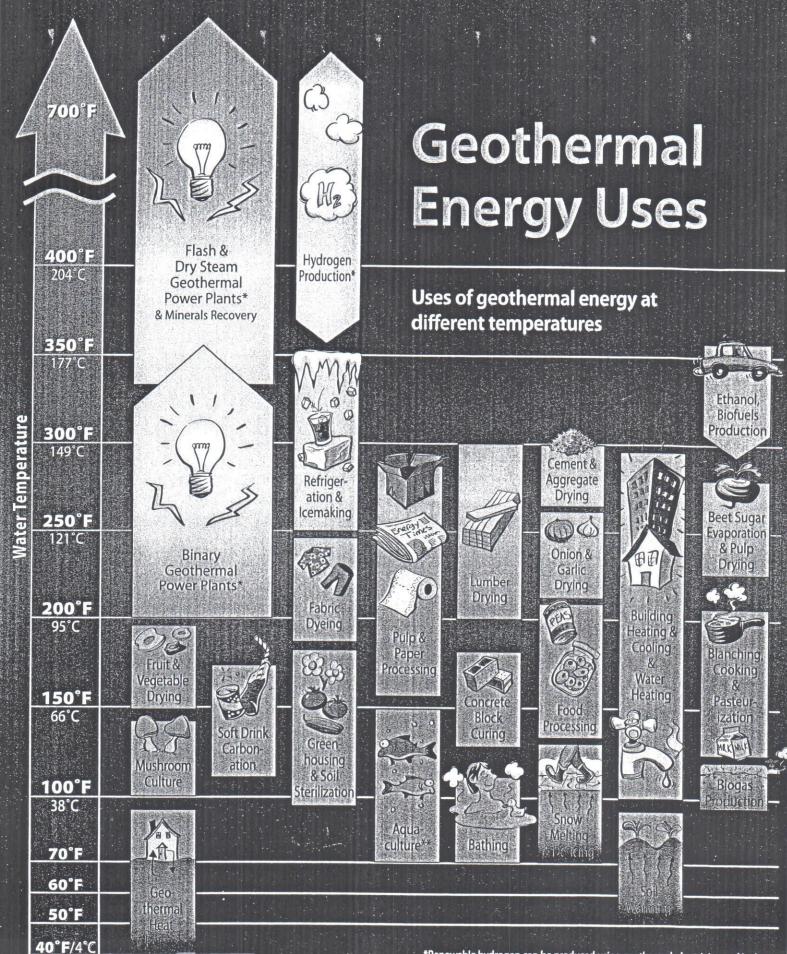
Contact Info:

Sustainable development project website: Resort website: www.chenahotsprings.com Phone number: (907) 451-8104 PO Box 58740 • Fairbanks, AK 99709 www.yourownpower.com

## Chena Hot Springs Resort

today to build a strong tomorrow Achieving sustainability through energy and food independence







In addition to producing 100% of our electricity from renewable energy, we are also very interested in looking at alternative fuels for transportation and to replace propane which is currently used in our kitchen, main lodge, and laundry. Beginning is 2008, Chena Hot Springs is planning to take advantage of excess power generation capacity during off-peak hours to produce hydrogen. This hydrogen will be initially mixed at low pressure with propane at a 15% to 85% mixture. This will reduce our propane needs on-site and help us move further toward our goal of being 100% independent of fossil fuels.

Chena is also researching options for using hydrogen for transportation applications, in additional to exploring the use of electric vehicles.



Van #3, part of Chena's shuttle fleet

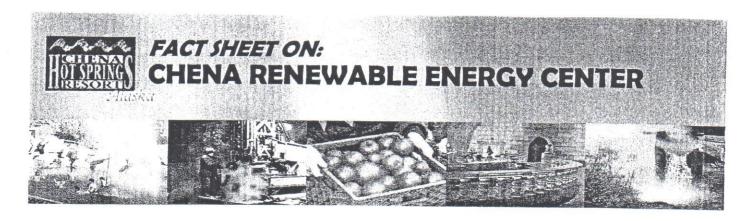
Chena Hot Springs
Electrolyzer, used to
generate 6kg of
Hydrogen per day

Hydrogen
Production
Facility at
Chena

While Chena moves toward a hydrogen future, we are also doing what we can today to conserve diesel fuel. We are recycling used vegetable oil from our restaurant to use directly as a fuel, and also use fish oil biodiesel in some test applications.



Chena waste vegetable oil powered Jeep



Chena Hot Springs Resort's interest in renewable energy extends beyond geothermal development. While Chena has focused primarily on geothermal development for heating, cooling (the ice museum) and power generation, there are several working projects onsite highlighting other types of renewable energy.

The most visible project is our water ram, which uses 10ft of water 'head' from the creek behind the hot springs to pump some of the water into a water tower. From the water tower, all of our extensive garden and greenhouse facilities are watered – all without using any electric power!

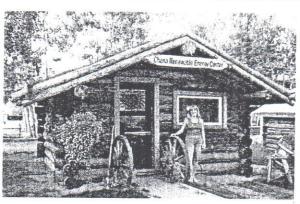
We also have a solar water fountain which we installed in front of the main pool building. This fountain has become a favorite attraction for all our visitors, kids and grownups alike!

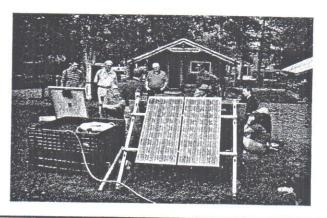
All of our renewable energy projects are part of our Chena Renewable Energy Center, which is open to the public throughout the summer months. The center hosts workshops on renewable energy and provides tours of the projects at Chena to the public.

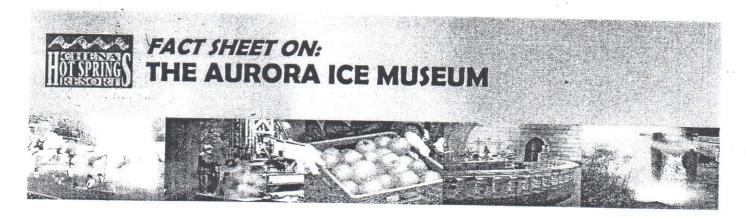




Chena Hot Springs also has a long standing interest in hydrogen, and is considering options for operating its guest shuttle bus on hydrogen. The hydrogen would be produced via electrolysis using power generated by the geothermal power plant.





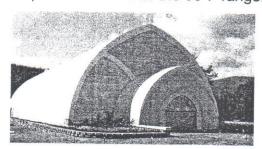


Fairbanks, Alaska is considered to be the capital of ice art in the world. It is the home of the International Ice Art Championships, and many of the top ice artists in the world call Fairbanks home. The Aurora Ice Museum was built as a way to boost tourism at Chena Hot Springs Resort, located 60 miles northeast of Fairbanks, Alaska, while simultaneously offering year-round employment for many of the ice artists in the area.

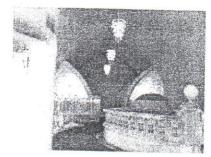
Chena Hot Springs erected the first version of the Aurora Ice Hotel (now renamed the Aurora Ice Museum) in January, 2004. The Ice Hotel was the first of its kind in the United States, and one of just a handful worldwide. The museum features a great hall and lounge area, chandeliers made of individually carved ice crystals, countless sculptures including a functional gigantic chess set, life sized jousting knights, an observation tower made of ice, and four galleries with varying themes. The architect of most of the art is 13 time World Ice Art Champion Steve Brice.

While long daylight hours and summer temperatures in the 90°F range melted the first Aurora Ice Hotel in July, 2004, the project was not abandoned. The second version was completed in January, 2005, with the ambitious goal of making it the only primarily ice structure in the world to stay up on a year round basis. Because of the high cost of electric power at the site (30¢ per kWhr) it was decided to use an absorption chiller design by Energy Concepts Co. and powered by the available geothermal resource to keep the Museum 'on ice' year-round. This chiller is a unique, 3 pressure design and the first of it's kind to be built in the world. In September 2005, Chena Hot Springs won an award for the absorption chiller from the Geothermal Resource Council for the best new direct use geothermal project in the United States.

The Ice Museum has been a resounding success, with 10,000 visitors touring the facility during the summer of 2005, and the structure withstanding record setting high temperatures well into the 90°F range.









Chena Hot Springs is working toward becoming a self-sustaining community, and an important part of making this vision a reality is to strive for greater independence in food production. Chena installed a small test greenhouse in 2004, which has been operating year round and is heated entirely with water from our geothermal resource. Last January, we were able to maintain greenhouse temperatures of 85°F while ambient temperatures dropped to -45°F, which is typical for Interior Alaskan winters. This 130°F temperature differential was the largest recorded for any controlled environment production facility in the U.S. last year.

Chena has recently added to its controlled environment facilities with the construction of a new 4320ft² greenhouse to provide our restaurant with a greater variety of fresh produce on a year-round basis. Crops planned for the greenhouse include tomatoes, lettuce, green beans, peppers, cucumbers, and numerous greens and herbs

Chena Hot Springs is also working in partnership with the University of Alaska Agriculture and Forestry Experiment Station on a controlled environment research project for investigating the opportunities of establishing similar projects throughout the State of Alaska, using geothermal or other waste heat streams.







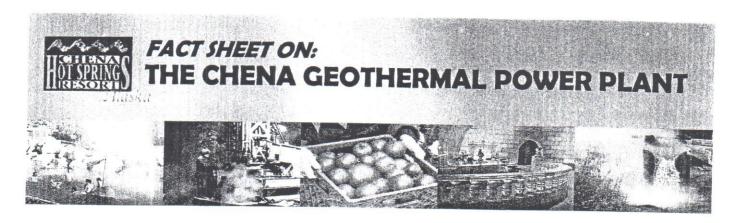










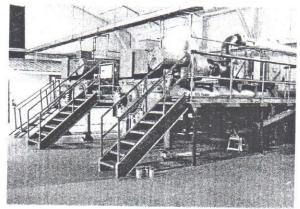


Alaska has more geothermal resources than any other state in the country, and yet until recently none of these resources had been developed for power generation. This picture has changed dramatically with the July 2006 installation of the Chena Hot Springs 400kW geothermal power plant. The Chena power plant, designed and built by United Technologies Corporation (UTC), has pushed the envelope for geothermal resource development for power generation and put Alaska squarely on the map for new geothermal technologies. Generating power from water less than 165°F, Chena Hot Springs is the lowest temperature geothermal resource to be used for power production in the world. We hope this will be the first step toward much greater geothermal development in the state. The Chena geothermal power plant has reduced the cost of power production from 30¢ (using a diesel generator) to less than 6¢ per kWhr.

The challenge for moderate temperature, small scale geothermal development has been to bring the cost down to a level where it is economical to develop small geothermal fields. United Technologies Corporation (UTC), the manufacturer of the Chena power plant, has been working toward that goal. In the past, small geothermal power plants have been built to order using tailor made components, which has greatly increased both the expense and the lead time for such units.

UTC's Research Center has teamed up with their sister divisions, Carrier and UTC Power, to reverse engineer mass produced Carrier chiller components to dramatically reduce

the cost of production, and allow for modular construction. UTC demonstrated this technology with the release of the PureCycle 225 modular power plant in 2003, which is designed to operate off industrial waste applications. The Chena project is the first application of this innovative approach to a geothermal heat source. The project has since received international recognition, including the 2006 Project of the Year Award from Power Engineering Magazine and a 2007 R&D 100 Award as one of the most innovative new projects of the year.



The two PureCycle 225 geothermal power plant modules installed at Chena Hot Springs