

Anchorage Solar Tour: Tour day Saturday, June 9th, 2012 – Tour Starts At 9:45am

Start Of Tour Meeting Location: Meet at downtown Kaladi Bros. Coffee (621 W. 6th Ave) by 9:45am. Tour organizer Andy Baker (cell 350-2084) will be there and the group will walk across Town Square Park to the Solar Building @ 10am. There is plenty of free parking downtown on Saturday mornings, plan to arrive downtown by 9:30am so you have plenty of time to park before the tour starts. You can meet up with other tour goers at this first site and car pool to other sites, the time slots for other tour site visits are given below.

Site #1	10am – 11:30am	Solar Building	441 W. 5 th Avenue	Downtown
Site #2a (choose one)	11:30am – 1pm	Seth Downs Tri-plex	821 Edward Street	East Anchorage
Site #2b	11:30am – 1pm	Kittleson House	5976 Muirwood Drive	Sand Lake Area
Site #3	1pm – 2:30pm	H₂Oasis Water Park	1520 O’Malley Road	South Anchorage
Site #4	2:30pm - 4pm	Doolen Residence	15051 Echo Canyon Road	Upper Hillside
Site #5	1pm – 3pm	EcoEscape Bio Shelter	3901 Delores Drive	Eagle River
Site #6	3pm – 4pm	Solcab House	19949 Meadow Canyon Drive	Eagle River

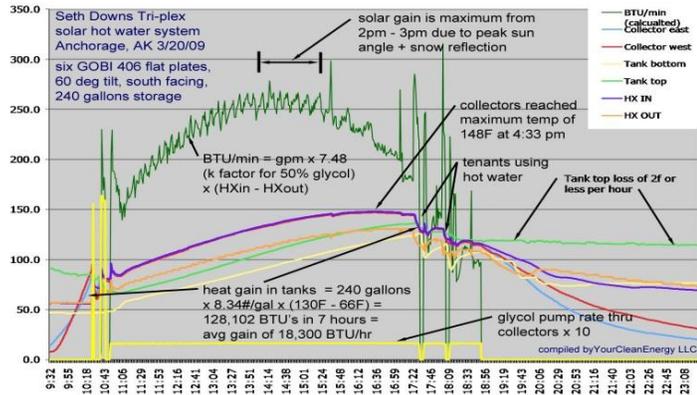
Site #1: Solar Building – Downtown Anchorage – 441 W. 5th Avenue



Commercial office building. The solar building features a photovoltaic solar array of 96 Trina Solar tsm180-da01 at 180 watts = 17.28 kilowatts output. Three SMA 6000 watt inverters convert the dc power into ac and feed it into the building electrical service. This system is now the largest net metered solar PV array in the Anchorage area, the local utility is ML&P. Part of the south facade was used to place the panels at 90 degree tilt. This incorporates the array into the existing building envelope with very little maintenance requirements. Building Owner: **Steve Zelener**; Architect: **Mayer Sattler-Smith**; Contractor: **Renewable Energy Systems**

This tour site is open from 10am to 11:30am; tours will start at the 5th Avenue street entrance to the building. If you arrive while a tour is in progress, please wait outside until the next tour starts.

Site #2a - Seth Downs Triplex – East Anchorage – 821 Edward Street



This Solar Thermal system consists of 6 Heliodyne flat plate collectors, 240 gallons water storage, counter flow tube & shell heat exchanger, differential controller and web based data logging. The system provides 50% of annual domestic hot water (showers, laundry, sinks) with a simple and heavy duty Alaskan style flat plate solar hot water heating system. Temperature, collector flow, and BTU data is logged every minute of each day to track performance through the year. This project provided essential data to demonstrate that flat plate collectors can indeed be effective in our Anchorage climate. System financial evaluation and engineering design by clean energy consultant Andy Baker, PE of www.yourcleanenergy.us The system was built in September 2008 by the owner Seth Downs, with help from friends and the staff of YourCleanEnergy. **This tour site is open from 11:30am to 1pm; please park at the adjacent Ptarmigan Elementary School lot.**

Site #2b – Kittleson House – Sand Lake Area, Anchorage – 5976 Muirwood Drive



This cutting edge house was designed from the start with the correct roof angle and orientation for great solar gain. Here is how owners Nicholas & Joann Kittleson describe the solar performance of their 2,000 sq ft house (new in May 2011): ***“Amazing! Passive overheats house unless we regulate by opening windows. In winter we use HRV to keep and circulate heat. Our domestic hot water has been provided nearly completely by solar collection since early March.”*** Built by Levi Smith of Alaska Decks & More LLC, with solar energy consulting by YourCleanEnergy LLC. The passive solar performance is enhanced by a large area of south facing Shiloh windows, moderate east and west window area, and minimal windows on the north side. The active solar hot water system consists of two Heliodyne 4 ft x 10 ft cold climate flat plate collectors, plus two 80 gallon storage tanks inside the building envelope. Federal Tax Credit of \$4,000. 5Star+ rebate = \$7,500. **Open from 11:30am to 1pm, park on street.**

Site #3 - H₂Oasis Indoor Water Park – South Anchorage – 1520 O’Malley Road



Commercial water park. Solar Thermal System Pre-heats Pool Water In Summer Months: A total of 60 Vortex 4ft x 12ft polyethylene flat plate collectors are located on the roof, along with a 50 gallon Progressive Tube Solar Water Heater. City water is used as make-up water for the large swimming pools and this enters the facility at 45F. The solar thermal collectors heat the city water up to about 120F before it is piped into the pool that is maintained at 85F. It is necessary to climb a steep set of stairs to access the roof and see the collectors. The owner of contact is Dennis Prendeville and the system was installed by the staff of H₂Oasis. **This site is open from 1pm to 2:30pm; please park in the H₂Oasis customer parking lot.**

Site #4 - Doolen Residence – Anchorage Hillside – 15051 Echo Canyon Road



Over 20 years ago this off grid home started with a small PV and wind turbine system installed by George Menard of Invertech. This year a major system upgrade was completed to bring the PV array to 1,600 watts. This energy efficient home was constructed using SIPS (Structural Insulated Panel Systems) by Enercept and JADA Construction Company. The owners and installers are Dave and Dale Doolen.

Directions: Take O'Malley Road East to Hillside Drive. Turn Left on Upper DeArmoun Road, go 1 mile, bear right onto Canyon Road for 1.5 miles. Turn right on Echo Canyon Road (on Google maps this is called Echo St). After ¼ mile you will see home with Jada Construction sign on the Second driveway on left. House phone is 348-0634.

This tour site is open from 2:30pm to 4pm. Please park in the driveway and allow room for other vehicles.

Site #5 – EcoEscape Bio Shelter – Eagle River – 3901 Delores Drive



Possibly Alaska's first passive solar home, this house, designed and built by Bob Crosby in 1985, was a model for an elegant, energy-efficient design (not a cabin in the woods) for Alaskans, especially those living in rural areas. It even received a national energy award in 1987. The south-facing wall of windows uses solar heat that's collected in the gravel and water of the solarium to warm the house, which is built into the side of the Chugach mountains. In addition to the passive solar design, the home integrates all of its systems to work in harmony, much like the human body does. It takes in rain and snow melt, cleans it, and uses the koi to test the water for human consumption. It collects its waste and, with the help of worms, fertilizes the gardens. With the help of bacteria, it digests its own gray water and the bacteria then feed the fish. It is an historic home, which still has relevance for today's home designs. **Directions:** Take the 1st Exit off of the Glenn coming from Anchorage (Hiland Road) and continue straight on Eagle River Loop Road through 3 stop lights. Turn right at Walmart and start your odometer. Drive for 9.5 miles on Eagle River Road turning left on Prudhoe Bay. Drive one mile up the mountain and take a sharp left on Delores. Stay on that altitude. We are the 2nd driveway on the right: 3901 Delores Dr. Land line: 622-3969.

Site #6 - Solcab House – Eagle River – 19949 Meadow Canyon Drive



Solcab - The house faces south for maximized solar exposure. The first floor elevation, generated by the shadow line at winter solstice of Mt. Gordon Lyon, approximate 5 miles to the south, will ensure that the house will get solar exposure even at the shortest day of the year. The structural system is made up of post and beam with a super-insulated exterior shell finished with corrugated metal for ease of maintenance and added security for potential wildfires. The main space of the home is a south facing room with floor to ceiling glass. An intimate window seat to the west is centered on the view of volcano Mt. Redoubt. Over the open stair are monitor windows, allowing for ever-changing light conditions to be announced within the house. The interior of the house is revealing its structure and materiality in a cabin like reference to its location and the informal life style of its occupants. The 1800 sq ft, home, designed by architect Klaus Mayer, was built in 2000. **This tour site is open from 3pm to 4pm; please park in the driveway and leave room for other vehicles.**