# Nevada Energy Code Collaborative Meeting Minutes
# August 3, 2022

Recording of meeting**:**
**https://drive.google.com/file/d/1g1RcQ41rUUCBwrlHvlsUd6hNDLskHJz0/view?usp=sharing**

## Welcome and Introductions!

This quarters meeting includes discussions addressing water conservation and adoption of the 2021 IECC. Information on the upcoming training phase of the US DOE residential energy code study was also discussed.

## Water – a critical issue what the housing industry is doing (02:15 in the video recording)

Ryan Meres with RESNET provided a presentation on the HERS H20 program and how homebuilders are addressing the challenges with water needs by the industry. A quick highlight of how the HERS H20 program builds off the HERS rating system and how it supports new residential construction. At this time there have been over 2,000 homes certified with HERS H20 in Nevada. RESNET and EPA launched a pilot project in late 2020.

Water has become an important issue that one community in Utah has put a moratorium for new construction because of water constraints in that community. And in other jurisdictions water tap fees have been increasing at rates above inflation.

RESNET has published Standard 850 (ANSI/RESNET/ICC 850-2020) as the standard for calculating and labeling water use in one- and two-family dwellings. These requirements for labeling support the EPAs Water Sense program and includes a standard water cost savings calculation across these building types.

The RESNET HERS H20 also addresses climate zones and locations by incorporating water and climate data down to the zip code level. The program also looks at water temperature and hardness of water in the program. Both second two conditions can impact water usage.

There are numerous resources at RESNET (https://www.resnet.us/about/hersh2o/) to support builders and designers of highly water efficient housing including inspection checklists, guidance documents, implementation guidance and more.

## Water demand – updates from 80 years ago (22:30 in the video recording)

Gary Klein, Gary Klein Associates presented on tools to assist builders, developers and other design professionals on how to design water systems to support water demands

while reducing water usage and upfront construction costs for new buildings. He shared about the Water Demand Calculator (Link) which is a method to right-size plumbing using modern flow rates, modern fixtures, and modern probability of simultaneous use.

The rules for domestic hot and cold-water plumbing were written in 1940. In 1941 a paper was written that documented pressure flow losses in pipe fittings – this was using steel piping. Most modern plumbing is plastic with insert fittings that further reduces water flow. About 10 years ago IAPMO created a task group to address modern plumbing flow rates. In 2017 it became a standard and was adopted in the UPC in 2018 as Appendix M.

As an example, a 35-unit apartment building will typically see less than 25% simultaneous usage. The plumbing code states it must be 70 gallons per minute. In one project in New York a building study only saw only 3 gpm for hot and no more than 5 gpm for cold. The question then asks why industry is designing with historically high flow – if the flow rates are so low why are the pipes so big? In this one case study each unit saw a savings of $850 in plumbing costs.

Rule of thumb, actual values are when a pipe is reduced in size by one size the volume of water is reduced by half, so there is less water waste. In this case study they were able to reduce from ¾ to 3/8 size piping and reduce water and time to have hot water reach the fixture saving water.

Several states have adopted the calculator. Nevada has adopted. California has not yet adopted the calculator.

## 2021 IECC Activity in Clark County (47:00 in video recording)

Marci Henson, Clark County, presented on the All-In Clark County and how an update to the 2021 IECC is part of this effort. The All-In Clark County addresses climate change with a goal of a more sustainable future. The County is taking a bold, and smart, step forward with an inclusive attitude to create prosperity and well-being of all for today and future generations.

The County looks at this challenge in two ways – reduce GHG emissions and prepare for the impacts that will come from changes in the climate. There are six key areas including buildings and development (the others include clean/reliable energy, equitable mobility, diverse and circular economy, sustainable water and a resilient and healthy community).

The County took an inventory of GHG emissions in 2019 and found that buildings account for approximately 41% of emissions. The priorities include reducing GHG between now and 2030, leverage technology and deliver a plan to reach net zero by 2050.

Strategies to affect change include demand management, increasing renewable energy, and moving transportation to electrification.

They have reviewed NRS 701.220, adoption of latest energy codes in the state, and look at this as one path to bring buildings into their vision. The County's adoption process has started; the board of county commissioners were briefed on the plan on 7/18/2022, municipal briefings have occurred. The building department will lead the stakeholder process with a planned completion date by end of 2022. To gather more information, you can reach out to Marci at Clark County.

## Nevada Circuit Rider and Training Phase of Residential Field Study (1:10:00 in video recording)

Shaunna Mozingo, with MCG, reminded everyone of the benefit of the circuit rider program in the state that supports, building officials, builders, design professionals, trades and so-forth with energy code questions and support to design and construct buildings to meet energy code requirements.

The training phase of the residential field study will be starting soon with MCG as the prime contractor to support both in person and virtual trainings in Nevada. Shaunna and her team will be working with Robin and others on training plans in the state.

Information on the circuit rider program can be found at the Governor's Office of Energy's website - **https://energy.nv.gov/Programs/Building_Energy_Codes/Nevada_Energy_Code_Circuit_Rider/**. And the circuit rider can be reach via email at **nv.circuitrider@gmail.com**

Help select a date for the next meeting in **November/December 2022**. Please go to the **following link** and select dates that work for your schedule: **https://doodle.com/meeting/participate/id/avgnNQmb**