

**Town of Chevy Chase Climate & Environment Committee**  
**Induction Cooking Guide**  
**August 2022**

Background

This guide was created to provide information to Town of Chevy Chase residents who want to make the switch to induction cooking. The purpose of this guide is to provide a quick primer to encourage residents to switch to induction cooking by sharing basic information and learnings from publicly-available information and from residents who've already made the switch.

Induction cooking is a great alternative to gas or standard electric cooking since it uses no gas and less electricity than standard electric thus making it a more environmentally-friendly cooking solution. The basic thing to know about induction cooktops is that electricity is used to create a magnetic field which then causes your pan to heat up directly. Induction cooking is thus very energy-efficient because there is no warm-up/warm-down period and less wasted energy during the cooking process. You do need 240V power and you must use pans which have iron in order for the magnetic effect to work (iron pans, some stainless steels pan for example).

Some people compare induction cooking most closely to gas cooking because of the immediate heat level setting both provide compared to electric which has a warm-up and cool-down process (very inefficient). Induction cooking is more energy-efficient than gas cooking both because of the fuel source (especially if your electricity supply comes from renewable sources such as wind, solar or hydro) and because the pans themselves are heated directly whereas with gas the pans are being indirectly heated with the gas flame which is less efficient. There are longer lists of pros and cons in the Montgomery County article below and lower down in this document.

We recommend starting with <https://mygreenmontgomery.org/2021/the-benefits-of-switching-to-induction-cooking/> – this County managed website was created to provide residents with basic information about induction cooking and a comparison of induction vs. gas vs. electric cooking.

Here is a list of other helpful websites for basic information and research (or do your own internet searching for latest information):

<https://www.consumerreports.org/electric-induction-ranges/pros-and-cons-of-induction-cooktops-and-ranges-a5854942923/>

<https://www.lecreuset.co.za/blog/magnetic-attraction-understanding-induction-cooking>

<https://www.familyhandyman.com/list/best-induction-stove/>

<https://www.goodhousekeeping.com/appliances/g36572920/best-induction-cooktops/>

The Basic Pros and Cons (see also pros/cons in Montgomery County article):

### Pros

- Ease of use: Very easy to use, in general – for example, some models have “instant option” buttons for things like boiling water or simmering but there can be a learning curve for what temperature level to use for other dishes you prepare since you don’t have a visual cue as you may be used to with a gas flame (see the Con listed below). Some models are Wifi-enabled.
- Safety: Induction cooktops don’t get hot themselves, except via the reflected heat as your pans heat. This is a safety feature, for example if you have small children, but also an efficiency feature. However, once you put a pan on the cooktop, the cooktop can get hot from the reflected heat and some models have a light to alert you that the cooktop is warm. But, in general, finger burns are less frequent with induction cooktops.
- Cleaning: Very easy to keep glass top clean (dishwashing liquid mixed with water in a spray bottle or just plain water); since cooktop doesn’t itself heat up, there’s less “baked on” food like you get with gas or electric cooktops and no crevasses where food gets stuck; most models come with an “over the counter” edge feature so there’s no gap between the cooktop and your counter for food or crumbs to fall down into. (Standard electric glass cooktops share some of these same features.) Once you’re sure it’s cool, you can even use a squeegee and a towel to clean the cooktop and eliminate streaks – it is glass after all.
- Energy: Induction cooktops are very energy-efficient which is one reason they are so popular in Europe where energy prices are higher than in the US. This is especially true if your electricity supply is from renewable sources such as wind, solar or hydro – but induction cooktops are more energy-efficient than standard electric cooktops even if you’re using fossil-fuel powered electricity.
- Cooking: In general, people really like how easy and efficient induction cooking is. Many cooktops have bridging burner technology that enables cookware of all sizes to be used efficiently (Wolf and Bosch are 2 brands that have this convenience); some models do not have specific “burners” you have to use, you can put the pan anywhere on the cooktop. Induction cooktops start heating the pan immediately when you turn on the cooktop, there is no warmup period as with gas or electric so cook times are shorter.
- Space: Induction cooktops do not need an exhaust system as gas cooktops do, so that can be a space saver in some cases. Two residents made the conversion to induction when they found their “gas cooktop in a kitchen island” could not easily be replaced due to the venting considerations and product availability. In general, induction cooktops come in the standard industry sizes. There are plug-in standalone induction burners which can be used for situations where you just need or only have room for 1 or 2 burners.

- Cost: In general, induction cooktops and cookware are becoming less expensive as demand for them has increased, even without factoring in the energy savings on your electricity bill. There may be rebates available from Pepco.

### Cons

- Power: Must have 240 volt/50 amp circuit if there isn't one already in place for your cooktop (specific power can vary depending the model you have so clarify this with your appliance company/installer and electrician). If you buy an induction range (combined cooktop and oven), you will have an induction cooktop with a standard electric stove. These models will be pre-wired to transform the 240V power to 110V power for the standard electric oven component. If you're swapping out your gas cooktop, the gas can typically be capped off by your installer or just shut off yourself using an existing butterfly valve, but work with your installer or contractor as needed,
- Cookware: Requires cookware with iron in it (because induction cooking heats using a magnetron). All Clad, Le Creuset, Chantelle and Farberware are brands that offer induction-friendly cookware. You would have to replace aluminum, glass or copper cookware. Most cookware you buy these days is labelled indicating whether it is induction-friendly. For your existing cookware, it's easy to tell if it's induction-friendly or not: if a magnet sticks to the bottom of the pan, you're good, otherwise no. Some stainless steel cookware will work, some will not so need to check.
- Choice and Fit: With some cooktops, you must have the same brand for both cooktop and oven, which may not be what you want. In terms of form and fit (width, depth, height), clarify this with your appliance provider, electrician or contractor before you start your project so there are no "oops, something doesn't fit" surprises at time of installation.
- Safety: Like all glass cooktops (induction or electric), glass chipping or cracking can be an issue so one does need to treat the cooktop gently. Sometimes you do have to be careful not to leave a pot on the cooktop – remember that food in the pot can continue to cook after the cooktop is turned off, just from the residual heat in the pan.
- Ease of use: Since most induction cooktops use digital readouts, make sure these are readable for your situation. Digital controls can make it easier to use but just because it's digital doesn't make it easy to read or use for you. Try out the model you want to buy at an appliance store. There can be a learning curve for how to cook particular dishes, i.e. what temperature to use. Most induction cooktops use a numerical scale (e.g. 1-9) and since there's no visual cue as with a gas flame, you do have to learn what level to use for which purpose.