

Shifting Energy Demands During COVID19

0. Admin

Name of Surveyor: _____

Survey #: _____

Date and time of survey: _____

Relation to surveyed:

- A friend, acquaintance, or co-worker
- Someone referred by a friend, family member, or other acquaintance
- Family member
- Someone referred by another research team member

I. Living Conditions

3. What kind of building do you call home - do you rent, own, or have another arrangement?

- I live in a house or building that I own
- I rent an apartment
- I rent a house
- I rent a room
- I am homeless
- I live with a family member or friend
- I live in a mobile unit
- I live in a dorm
- I live in an assisted living arrangement/retirement home

- Other: _____

4. How many other people live at home with you? _____

4a. What is your relationship to the individuals that you live with (e.g. your children, parents, romantic partners, roommates)

5. Have you been able to continue living at home during COVID19 or have you needed to stay someplace else?

- Yes, I have been able to continue living in my pre-COVID-19 home.
- No, I have been forced to live elsewhere during COVID-19.
- No, I have chosen to live elsewhere during COVID-19.
- I am a college student who had to leave on-campus housing.
- I have been going back and forth between places
- Other, please explain _____

5a. **If no to Q5** How and why has your living situation changed. For example, did your living situation change because of government directed shelter-in-place orders? Or did you need to help take care of someone in a different household?

II. Work and School Conditions

7. What is your occupation?

8. Did the COVID-19 pandemic impact your employment? Check all that apply:

- I have been laid off.
- I have been furloughed.
- My number of work hours has been cut.
- My number of work hours has increased.
- I am working remotely now.
- I am now considered an essential worker.
- I am employed under the exact same conditions.
- It is an evolving situation.
- I am retired.

- I was unemployed prior to COVID-19.
- Other, please explain _____

9. **If employed** where are you currently working from?

- I am working at home remotely
- I am splitting my time between home and the office
- I am working at home, but I was working remotely from home prior to COVID19.
- I'm not an essential worker but I have returned to face-to-face work.
- I am considered an essential employee and I am still going into my workplace.
- Other

10. Are other people in your household working remotely?

- Yes, they are able to transition their work to a remote set up
- Yes, they were working remotely, but they were recently laid off
- No, their job cannot be done remotely.
- No, they are unemployed
- They are splitting their time between home and office
- There is a mix of situations in my household.
- I don't know
- N/A
- Other, please explain _____

10a. If yes to Q10, how many hours per week (estimated) is your household working from home? _____

11. Are there children or college students in your household learning remotely through their schools?

- Yes, their school activities have been transitioned online.
- No, we do not have the capacity to do school work at home.
- No, I do not live with any children.
- No, they are schooling in-person
- No, school has been discontinued or put on hold due to COVID-19.
- They are doing hybrid learning, where they are spending some days in-school and some days schooling remotely
- Other, please explain _____

11a. If yes to Q11, how many total hours per week are the students in your household doing school remotely? _____

III. Existing Home Infrastructure

12. When you hear the word 'energy', what's the first thing that comes to mind?

13. How did you learn about home energy systems?

14. What kind of heating system does your home use?

- Forced air heat (central heat/furnace)
- Forced air with cooling compressor (minisplit)
- Space heaters
- Radiators (boiler)
- Electric heater (typically baseboard)
- I don't know.
- Other, please explain: _____

14. What is the power source for your home heating system?

- Gas
- Electric
- Oil
- I don't know
- Other, please explain: _____

15. Have you ever lost heat in your home?

- Yes, my heater broke
- Yes, my utilities were shut off
- Yes, there was a power outage due to weather
- Yes, other: _____
- No
- Other, please explain _____

15a. **If yes to Q15** What did you do when you lost heat?

15b. **If no to Q15** what might you do if you did lose heat?

- Call my landlord.

- Call an HVAC company.
- Call my utility company.
- See if I could figure it out myself
- Ask someone I know who works with heaters to fix it.
- Use space heaters
- I don't know.
- Other: _____

16. If there was a government-issued stay-at-home order and non-essential businesses were closed, what would you do if you lost heat?

- Call my landlord.
- Call an HVAC company.
- Call my utility company.
- See if I could figure it out myself.
- Ask someone I know works with heaters to fix it.
- Use space heaters
- I don't know.
- Wait until the order is lifted to act on it.
- Other: _____

17. How do you cool your home during the summer months?

- Forced air cooling (central air)
- Window unit(s)
- Fans
- I go outside.
- I open my windows.
- I do not cool my home during the summer months
- Other, please explain:

18. What would you do if, during a heatwave, you lost power?

- I would turn on my back-up generator.
- I would go to the home of a friend or family member who did have power.
- I would wait until power was restored.
- I would try to reduce the amount of sunlight entering my common spaces in peak hours.
- I would go to a cooling center.
- I would try to air out the house as much as possible.
- I would drink cold beverages/take cool baths or showers

- I don't know.
- N/A
- Other, please explain:

19. What would you do if there was a government-issued stay-at-home order when you lost power during a heatwave?

- I would turn on my back-up generator.
- I would go to the home of a friend or family member who did have power.
- I would wait until power was restored.
- I would try to reduce the amount of sunlight entering my common spaces in peak hours.
- I would try to air out the house as much as possible.
- I would drink cold beverages/take cool baths or showers
- I would try to get a hold of a power generator.
- I don't know.
- Other, please explain:

20. In the three months before COVID-19, did you experience energy service disruptions with any of the following?

****Read each option below one at a time to record yes answers.****

- Electricity
- Heat
- Oil
- Internet
- Air Conditioning
- Gas
- Water
- No
- N/A
- Other

20a. Please describe the nature of the disruption, and how you addressed the disruption

~~21. Have you experienced energy service disruptions with any of the following since COVID-19 began? ****Read each option below one at a time to record yes answers.****~~

- ~~Electricity~~
- ~~Heat~~
- ~~Oil~~
- ~~Internet~~

- ~~Air Conditioning~~
- ~~Gas~~
- ~~Water~~
- ~~No~~
- ~~N/A~~
- ~~Other~~
-

~~21a. **If yes to Q20** Please describe the nature of the disruptions?~~

~~21b. **If yes to Q20** What did you do to address these disruptions?~~

22. Has anyone in your household ever experienced health issues related to temperature in the home (heat exhaustion, respiratory illness, etc.)?

- Yes
- No
- I don't know

22a. **If yes to Q22** Can you tell me more about this issue? Was it a chronic or acute condition, for example?

23. Does anyone in your household use a medical device that is powered by electricity?

- Yes, the device is exclusively powered by being connected to an outlet
- Yes, the device is able to run on its own for extended periods of time
- Yes, but the device is not needed on a daily basis
- No, no one in the house needs an electrically-powered device
- No, other: _____

24. Has your home ever been weatherized through the state weatherization program (WAP)?

- Yes, it has been weatherized through WAP.
- No, my home is not weatherized.
- No, but I have weatherized my own home.
- I don't know what weatherization is.
- I don't know what WAP is.
- Other, please explain:

25. On a scale of 1-5, how energy efficient do you think your home is? ***Then ask respondents what makes them think their home is energy efficient/inefficient?***

- 1, my home is very energy inefficient.
- 2, my home is not energy efficient.
- 3, my home is OK.
- 4, my home is fairly energy efficient.
- 5, my home is very energy efficient

25a. What do you think helps make your home energy efficient?

- I have LED light bulbs.
- I have solar panels.
- My house is well insulated.
- I use water saving technologies.
- I have double paned windows.
- I use Energy Star appliances.
- My electrical wiring is up to date.
- My stove does not emit any gas when I use it
- My behaviors make my home energy efficient.
- I don't know
- Other, please explain: _____

25b. What do you think makes your home energy inefficient?

- I don't use energy saving light bulbs
- My home does not use any renewable energy sources
- My home is not well insulated
- I don't practice conservation
- My windows are drafty
- I have older model appliances
- My electrical wiring has not been updated
- My stove emits gas when I use it
- My behaviors make my home energy inefficient
- I don't know
- Other, please explain:

III. Technology Use and Energy Consumption

26. If you and members of your COVID-19 household are working/schooling remotely, what kind of technology is required for work and school?

- Computers, laptops, or tablets
- Computer accessories such as microphones, headsets, etc.
- Email
- A landline
- Cloud hosting
- internet
- Virtual meeting applications
- Unlimited data
- Not Applicable
- Other, please explain:

26a. **If yes to Q26** Did you have these technologies before COVID-19 or did you have to purchase or borrow them in the last 4-8 weeks?

- No, some of these technologies needed to be purchased.
- No, we have borrowed some of these technologies.
- No, we have not been able to acquire the necessary technologies.
- Yes, we had everything we needed.
- Other, please explain:

27. Did members of your household take turns sharing devices, internet, or work space, before COVID-19?

- Yes, we took turns using the internet.
- Yes, we scheduled and shared use of computers, laptops, or tablets.
- Yes, we scheduled use of or shared office space.
- No, everyone had their own technology and space.
- It varied from day to day.
- I live alone prior to COVID-19.
- Other, please explain:

28. If you and members of your COVID-19 household are working or schooling remotely, do you have to share and/or take turns using various devices, the internet, or work space?

- Yes, we take turns using broadband internet.
- Yes, we are scheduling/sharing computers, laptops, or tablets.
- Yes, we are scheduling use of or sharing office space.

- No, everyone has their own technology and space.
- It varies from day to day.
- I live alone.
- No one is working or schooling remotely during COVID-19.
- Other, please explain:

IV. Bill Payment and Assistance Literacy

29. Does someone in your household pay any of the following utility bills? **Read each option below, one at a time, to record yes answers.**

- Electric
- Gas
- Oil
- Water
- Internet
- No, all household utilities are included in rent.
- I don't know
- N/A
- Other, please explain: _____

29a. **If yes to Q29** Has COVID-19 changed the way your household divides or pays for utility bills?

- Yes, it has changed because of COVID-19.
- Yes, it has changed because of something unrelated to COVID-19.
- No, nothing has changed.
- I don't know
- Other:

30. What's your indoor thermal comfort zone -- the lowest indoor temperature that you find acceptable, and the highest temperature that you find acceptable?

30a. Are there other factors that make indoor temperature unbearable? (i.e. humidity, drafts, intermittent heating and cooling)?

31a. Of the following utilities, is the bill amount different from what you would typically expect during this time of year? For example, winter 2020 versus winter 2021. Please check what is applicable.

	Water	Gas	Electric	Internet
Increased				
Decreased				
Stayed the same				
I don't know				

31b. Do you attribute this to the pandemic or something else? Please explain:

32. Has a change in your income or your COVID-19's household income impacted your ability to pay utility bills?

- There has not been a change in my income.
- There has not been a change in household income.
- Yes, it has impacted my households ability to pay utility bills
- Changes in income have not impacted our ability to pay bills.
- No
- Not yet, but it will in the coming months
- Other

32a. **If yes to Q32** What kind of utility bills, including internet bills, are you struggling to pay?

- Water
- Electric
- Gas
- Internet
- Oil
- Phone
- All of the above
- None of the above

- I don't know
- Other

32b. If your utility bills have increased, how are you coping with increased expenses?

33. Have you ever turned off your heating or air conditioning in order to save money on utility bills?

- Yes, in the past.
- Yes, due to COVID19.
- No.
- No, but I have turned it down.
- No, but this is something I am considering because of COVID-19.
- I don't control the temperature of my home.
- Other
- Please Explain: _____

34. Have you ever had to choose between paying your utility bills and paying other bills such as rent, groceries, phone bill, etc.?

- Yes, in the past
- Yes due to COVID-19
- No, I have never had to make such a decision.
- No, but I am worried that I might have to due to COVID-19 impacts.
- N/A
- Other:

36. Have you ever received a utility shut-off notice for any of the following services?

- Water
- Gas
- Electric
- Internet
- Phone
- Oil
- No, I have never received a shut-off notice.
- I don't know.
- N/A
- Other, please explain:

36a. **If yes to Q36** Have you received a shut-off notice in the past 12 months?
Please explain: _____

37. What would you do if you received a shut-off notice and did not have the money to prevent the shut-off? _____

38. On a scale of one to five, how aware of household energy use were you before COVID-19?

- 5 - very aware, I look at and understand my bill every month and practice conservation.
- 4 - aware enough to understand my monthly bill
- 3 - somewhat aware, I look at my bill some months
- 2 - not that aware, I don't look at my bill
- 1 - I am completely unaware of my household energy use

38a. Have you ever found it difficult/confusing to read your utility bill? If so, what makes them confusing?"

39. Since COVID-19 began, have you or others in your household been aware of changes in daily energy consumption that cannot be attributed to seasonal change, for example?

- Yes, we are using more energy.
- Yes, we are using less energy.
- No, our energy consumption has stayed the same
- I don't know
- N/A
- Other, please explain:

39a. **If increased consumption in Q39** What are the sources of increased consumption? Check all that apply. (Note: Make sure to read off all of these options)

- More lights are on
- We are keeping the heat on a higher temperature
- We are using air conditioning for longer periods of time.
- We are using more appliances to prepare food during the day
- We are using other major appliances more often
- More TV watching
- More video game play
- The use of other entertainment technologies

- Members of the household are sleeping less
- Medical devices are being used
- We are using more water
- We are using more electric-powered devices to work/study from home
- Other, please explain:

40. Before COVID-19, did you or other members of your household use any strategies to reduce your energy use (including heat, electricity, water, etc.) (Note: Do not list options for this question):

- Try to use as much sunlight as possible to save on electric
- Trying not to use a dryer to save on electric
- Lowering water heater to save on gas
- Lowering heating/cooling systems to save on electric and/or gas
- Wearing more clothes / using more blankets to save on heating
- Taking shorter showers to save on water
- Recycling old appliances and purchasing new energy-efficient ones
- Switching to LED light bulbs
- Unplugging devices that are not being used
- Consulting educational material or taking classes/workshops on conservation
- Using curtains to cool/conserves heat
- Going out (malls/libraries, etc.)
- None of the above
- All of the above
- Other _____

41. Is your COVID-19 household using any new strategies to reduce your energy use during this time? (Note: Do not list options for this)

- Try to use as much sunlight as possible to save on electric
- Trying not to use a dryer to save on electric
- Lowering water heater to save on gas
- Lowering heating/cooling systems to save on electric and/or gas
- Wearing more clothes / using more blankets to save on heating
- Taking shorter showers to save on water
- Recycling old appliances and purchasing new energy-efficient ones
- Switching to LED light bulbs
- Unplugging devices that are not being used

- Consulting educational material or taking classes/workshops on conservation
- Using curtains to cool/conserve heat
- Going out (malls/libraries, etc.)
- None of the above
- All of the above
- Other _____

42. Has COVID-19 changed other weekly/monthly expenses or created new expenses?
Please list:

43. Are you or the owner of the building where you live deferring maintenance on the building?

- Yes
- No
- Maybe
- I don't know.
- Other

43a. If yes, what kind of maintenance is being deferred and why? *Admin note: for instance, is it due to COVID-19?*

46. Are you aware of any of the following programs? Check the box if you are aware of the program.

- LIHEAP? (Low Income Home Energy Assistance Program)
- CAP? (Customer Assistance Program)
- WAP? (Weatherization Assistance Program)
- Earned Income Tax Credit (EITC)
- Supplemental Security Income (SSI)
- None of the above
- All of the above

44. Have you ever enrolled in an energy assistance program to help with utility bill payment?

- Yes, I have, before COVID-19.
- Yes, I have since COVID-19 began.
- No, I have not.

- I was unaware there were such programs.
- I don't know
- N/A

45. Are you aware of any programs that could help with utility bill payment during COVID-19? Check all that apply:

- Yes
- No
- Maybe
- Other

45a. **If yes to Q45** How did you hear about it and what does this assistance look like? Explain.

48. Is there an energy co-op in your area? *According to definitions in Energy Democracy (Fairchild & Weinrub, 2017), "energy co-ops are organizations where buying power in the energy market is self-organized by individuals and smaller businesses combining their purchasing powers" - I.e. energy co-ops are community-owned.*

- Yes, there is an energy co-op in my area; I am a member.
- Yes, there is an energy co-op in my area; I am not a member.
- No, there is not an energy co-op in my area.
- I don't know what an energy co-op is; I don't think there is an energy co-op in my area.
- I don't know; this is the first time I am hearing about energy co-ops.
- I know what energy co-ops are; I don't know of any in my area.
- Other

49. Do you think you have a right to energy?

- Yes
- No
- I don't know

49a. **If yes to Q49** What do you think your *energy rights* are?

- I have a right to electricity.
- I have a right to internet.

- I have a right to air conditioning.
- I have a right to clean water for bathing, cooking, and drinking.
- I have a right to heat.
- I have a right to choose my energy provider.
- I have a right to choose the source of my energy supply.
- I have a right to phone service.
- I have a right to financial assistance for any of these services
- I have a right to an itemized (breakdown of my) utility bill
- I have a right to updated appliances, if I am a renter, so that my bills are affordable.
- I have a right to appliances and HVAC units that keep my living space healthy.

49b. **If no to Q49** Why not?

49c. **If no to Q49b** Do you think there are energy services that are needed to succeed in society?

50. Has the survey made you think differently about energy?

51. Do you have any questions or concerns about energy that you did not have before taking this survey?

V. Demographics

51. I'm going to read a list of gender identities and you tell me which best apply(ies) to you. Feel free to select multiple answers:

- Female
- Male
- Genderqueer
- Agender
- Gender questioning
- Cisgender
- Transgender
- Any identity not listed above
- Prefer not to say _____

52. What is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75-84
- 85-94
- 95-104
- 105+

53. I'm going to read a list of race and ethnicity identities, please tell me which best describe(s) you? Check all that apply.

- Native American or Alaska Native
- Asian
- Black or African American
- Middle Easterner or North African
- Native Hawaiian or Other Pacific Islander
- White
- Hispanic, Latino, or Spanish origin
- Any identity not listed above _____

54. What is the highest level of education you have completed?

- No Schooling Completed
- Elementary
- Some High School
- Completed High School
- Technical or Trade School
- Associated Degree
- Some College
- Completed College
- Some Graduate School
- Completed Graduate School

55. What is your annual income? _____

56. What zip code do you currently live in? _____

57. Are you willing to do a follow-up open-ended interview?

58. Would you like to stay informed about the project results?

59. Admin: How long did it take to complete this survey?

60. Admin: Any additional comments and survey reflections.

(If yes to either, survey administer log email address or phone number on separate spreadsheet)