

Interview guide

Investigating occupant behavior in relation to room temperature and interest in feedback on how to reduce energy used for heating

Introduction to the interview

Hi, and thank you for accepting this invitation to an interview.

Short intro of aim: Gain insight and learn more about your typical behavior in this apartment in relation to temperature and energy use: heating only (cooling will be the focus in August 2023).

Why we want to talk about this: We want to learn more about how we can provide recommendations on energy-efficient measures in residential buildings.

Identify where in their homes the occupants can change their energy-related behavior related to the heating use, thus reducing their energy bill.

We want to know what you do, not what you think you should do

The interview is very open, so please speak as freely as you feel like. There are no correct or wrong answers or behavior.

The interview and visit will last for around 30 minutes to 1 hour. We will ask questions regarding your daily activities, routines, your experience of the temperature in your apartment, and which measures to stay comfortable/satisfied with the temperature conditions.

- I would like to electronically record and transcribed by myself. Is that OK for you?
- The interview is entirely confidential and will be anonymized and stored in a safe space.
- Confirm the person we are talking with (name, age, occupation, apartment number).

Approximate schedule

- Introduction, 10 minutes (cake, coffee, tea, find a place to sit)
- Interview, 30 minutes
- Tour of the apartment, 15 minutes
- Conclusions, 5 minutes

The entire event will last a maximum of 1 hour.

Main topics and questions

- Start recording
- Focus on heating season (October, November, December, January, February and March)

Main topic	Questions	Notes
Occupant information	<p>Have the occupant to ...</p> <p>Confirm age, occupation, earlier occupation, and how long the occupants have lived in the apartment.</p>	
<p>Everyday life and behavior in the apartment</p> <p>- Presence and activity</p>	<p>What are your daily routines? Can you talk me through it?</p> <p>Daily routines in general or related to...</p> <ul style="list-style-type: none"> • Do you have a day job? Home office, or do you go to the office? • Does it vary, or is it typically constant? <p>Sleeping routines</p> <ul style="list-style-type: none"> • Does it vary, or is it typically constant? • Do you have visitors or gatherings frequently? 	
<p>Temperature in your apartment/rooms</p> <p>- How do they regulate the temperature in the rooms</p>	<p>How do you regulate the <u>temperature</u> in the apartment? (define the thermostat-setting definition if the occupant does not mention this)</p> <ul style="list-style-type: none"> • Do you differentiate between rooms (kitchen / living room / bedroom / large bedroom) <ul style="list-style-type: none"> ◦ Do you vary the temperature/thermostat setting? Why do you have this thermostat setting in this room? ◦ Who regulates the temperature in the various rooms? ◦ How often? ◦ Activity and clothing level – important to address this for comparison. Typical for this period of the year? • Differentiate between daytime/nighttime in the various rooms <ul style="list-style-type: none"> ◦ Are you satisfied with the temperature you have? 	

	<ul style="list-style-type: none"> ○ Do you often feel too cold or too warm? What do you do if you feel uncomfortable? ○ E.g., what they do as 1st, 2nd, 3rd action? (passive/active actions) <ul style="list-style-type: none"> ▪ Clothing level ▪ Activity level ▪ Solar shading/blinds ▪ Typical other adaptations (the various actions possible) • Do you open windows? Why do you open windows? How much, position of window do you open? • Heating setpoint changes? 	
<p>Internal doors opening/closing</p> <p>- Factors affecting air movement (internal actions driven by occupants)</p>	<p>Do you think about how your doors are open or closed in the apartment?</p> <ul style="list-style-type: none"> • Are you consistent with having closed or open internal doors? • Any specific time or event? • How do you find the ventilation in the apartment? 	
<p>Direct window opening questions</p> <p>(help questions)</p>	<ul style="list-style-type: none"> • Are you aware/careful with opening/closing windows in the winter period? • Here specify when and for how long they have opened their windows during the measurement campaign – any particular reason? • For how long do you open windows? • Any other reasons for opening windows? 	
<p>Direct heating setpoint changes questions</p> <p>(help questions)</p>	<ul style="list-style-type: none"> • When and why do you change the set points? • Why do you differentiate the set points between rooms? • Do you change the setpoint more often in some rooms than the others? Do you keep the doors open/close between rooms? • Do they regulate their setpoints differently for a sunny and cloudy day? (awareness about passive gains) - When and how did you last adjust the heating? - Was this different from how you usually do it? - How does heating usage differ on weekdays compared to weekends? 	

	<ul style="list-style-type: none"> - Are there activities where you use or adjust other sources of warmth? (e.g., blankets, clothing, bathing, opening windows, lighting candles) 	
<p>Existing energy use monitoring system in the apartment</p> <p>- Systems integrated for the occupant</p>	<p>Do you use the monitor in the hallway that displays your energy use? And how?</p> <ul style="list-style-type: none"> • How often do you use this? • Which information do you use, or are mostly interested in? • Are you affected by this monitor in any way? • Is there some information you are missing? 	
<p>Feedback regarding advice on the energy use and indoor environment</p>	<p>Would you be interested in some kind of feedback on how to reduce your heating bill?</p> <ul style="list-style-type: none"> • Which information is the most interesting for you? Energy use per day or indoor environment data (data regarding your indoor air temperature and air quality? Would you like to follow your hourly values, daily profile? • How would you like to get this feedback? (app, on the monitor, paper, or any other way?) • Would you like to get it automatically? Or would you like to initiate when to receive this information? • In which situations do you want or don't want feedback? Only when you could change something? • How often? <p>Help sentences: E.g., every week OR when something is wrong or a certain threshold is passed – a type of alarm, e.g. when you are 50% off your heating bill?</p> <p>Another possibility: if you have higher temperatures than the average temperature in your staircase (gamification approach) would you like to see if you have a higher or lower heating bill compared to your neighbors?</p>	
<p>Measurement campaign</p>	<p>Thank you - you filled out a logbook last week</p> <p>How was it to fill out, overall?</p> <ul style="list-style-type: none"> • Did you get affected by it anyway regarding how you live in the apartment? For example, use of equipment, heating, or similar? • Do you think you have had the opportunity to tell the story of how you generally feel during the heating season/winter? 	

Behavior changes over the last years/year	<p>Are you aware of the current energy crises and increase of energy prices?</p> <ul style="list-style-type: none"> • If so, has this affected you in anyway? <p>Have you had the same typical behavior the last years? Or has it changed in any way? Who?</p>	
	Wrapping up ...	
Room tour	<ul style="list-style-type: none"> • Can you show us the rooms in your home? • How do you use them? • What does your typical schedule look like here? (If not answered above) <p>When and how do you use the different rooms in your home? Are there places in your home where you spend more time than others? Why? Has this changed over time? Are there places in your home where you don't spend time? Why? Is there a difference in how you use your home, for example, in summer and winter?</p>	Have floor plan ready with focus points
Ending	<p>Thank you for your time and feedback.</p> <p>That concludes our interview and visit for today. Is there anything I haven't asked about that you would like to add? Do you have any questions for me?</p> <p>You have my contact information, so feel free to reach out to me at any time.</p>	