

VONOVIA

# Capital Markets Day

Management Presentation

---

September 27, 2022

# Agenda

1. What (Not) to Do In This Environment
2. Impact from Increasing Energy Prices
3. Vonovia CMD 2022

# What We See When We Look at Our Business

The Fundamentals, the Environment, and Our Business Remain Stable and Strong

	<b>Rent growth</b>	2022ytd Mietspiegels suggest increasing momentum
	<b>Vacancy rate</b>	At record low
	<b>Bad debt</b>	At record low
	<b>DW integration</b>	On track for completion by 01/2023
	<b>Liquidity</b>	Unfettered access to secured and unsecured financing markets
	<b>Ratings</b>	S&P BBB+ (positive outlook confirmed 08/2022) and Moody's A3 (stable outlook confirmed 05/2022)
	<b>Market</b>	Underlying resi market fundamentals remain highly favorable, especially increasing supply/demand imbalance
	<b>Valuation</b>	Q3 valuation work does not suggest any meaningful change in asset pricing
	<b>Disposals</b>	The number of buyers has become smaller, but we remain convinced that transactions can still be done around current values (our dev-to-sell prices have never been higher); careful preparation & execution is key!

- We do not expect major changes. In any case, material changes would not come from one month or quarter to the next.
- As a consequence, we continue to optimize for best impact and not for maximum speed.

# But Capital Markets Are Expecting the Worst

Rapidly Increasing Fear that We Are Entering A Catastrophic Scenario



The changed macro environment has caused fear that tectonic shifts *must* happen, primarily around

- **Increased bund yields:** asset yields *must* widen.
- **Inflation:** cost base *must* be growing sharply.
- **Interest rates:** free cash flow *must* be falling rapidly.
- **Energy prices:** rent receivables *must* be going up massively.
- **Asset class:** it *must* be impossible to sell to anyone near the current values.
- **Leverage:** as assets values *must* fall, Vonovia *must* do an emergency equity raise to save the balance sheet.

- High sense of urgency and call for immediate action in the form of creating a trigger to stop the share price decline.
- General view that a meaningful transaction must be made – the faster, the better.
- Leverage targets to be reduced and redefined at a more ambitious level.

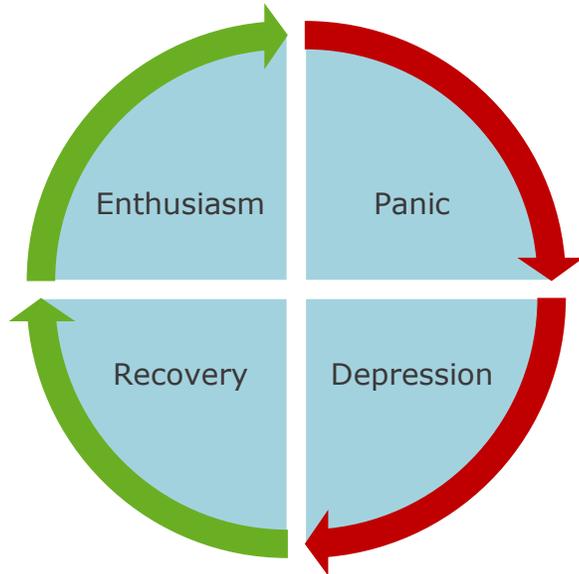
# Main Arguments for Our Confidence In Asset Values

---

50+ years market data evidence	Market data of the last 50+ years during which German house prices showed no material weakness (decline in real prices around turn of millennium coincided with almost double-digit vacancy rates).
Correlation with construction costs	There is a strong historic correlation between changes in construction prices and prices for existing homes.
Conservative mortgage financing	The conservative financing inherent in the German mortgage system (long-term financing at fixed rates and including an element of amortization).
Taxes	Capital gains tax if an asset is sold prior to owning it for ten years.
Transaction costs	High transaction cost with ca. 8% of the purchase price make short term-trading less attractive.
Upward pressure on rents	Upward pressure on rents as a result of the regulatory system in a supply-constrained market.
“Real” rents substantially higher	Gap between in-place rents and re-letting rents safeguards long-term growth trajectory.
Supply/demand imbalance	High level of demand for the product as a result of structural supply/demand imbalance.
No alternative	There is no substitute and no financially more attractive alternative for the product.

# It Boils Down to Two Fundamentally Different Views...

**"All real estate is cyclical"**

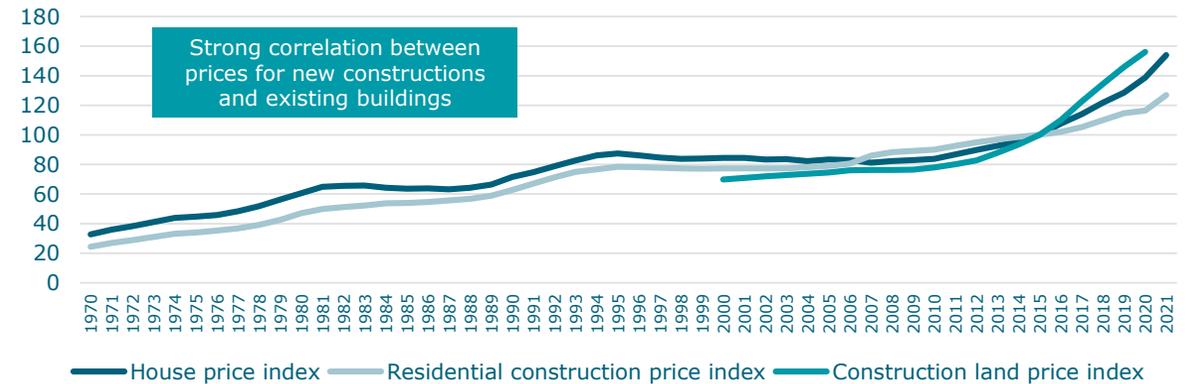


Case in point: US housing market

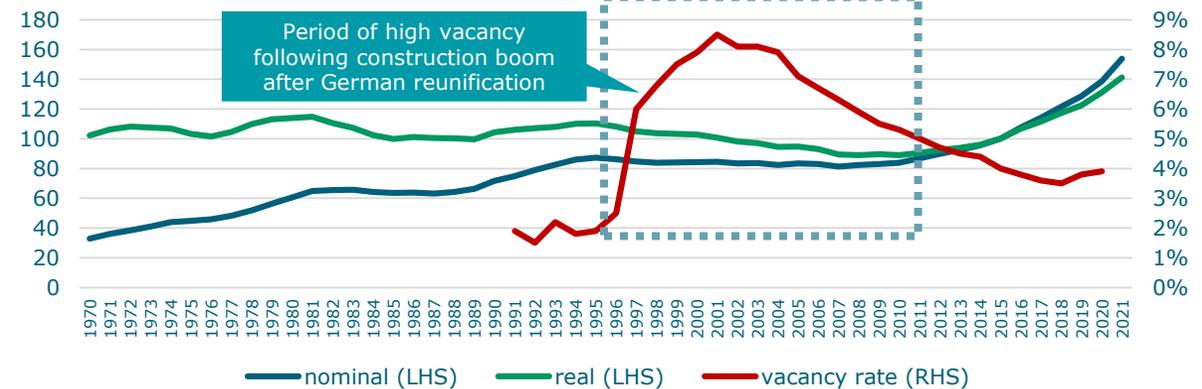
While very different especially in terms of financing and (non)regulation, the US housing market is often quoted as an example of the cyclicity also in residential real estate. In the context of the sub-prime crisis, US house prices fell by 27% over a span of ca. five years (2006-2011).<sup>1</sup>

**"German resi is different"**

House price and construction price indices (2015=100)<sup>2</sup>



OECD House Price Index Germany (2015=100) and vacancy rate<sup>3</sup>



<sup>1</sup> OECD. The Case Shiller US National Home Price Index (used by the Federal Reserve) also shows a peak-to-trough amplitude of 27% (2006-2012). <sup>2</sup> OECD (House price index); Federal Statistics Office (Residential Construction Price Index (*Baupreisindex für Wohngebäude*) and Construction Land Price Index (*Preisindex für Bauland*)). <sup>3</sup> GdW (Association of German Housing Companies) for vacancy rate. There are no reliable national statistics on vacancy levels prior to 1991.

# ...that Lead to Extremely Different Conclusions

## Leverage Game Plan

**"All real estate is cyclical"**

**"Make company weatherproof  
for the big storm"**

Put all efforts into fast-paced deleveraging to prepare balance sheet for substantial value decline.

## Disposal Game Plan

**"Rush to the door"**

Sell as fast as possible to avoid selling in a declining market.

**"German resi is different"**

**"No storm clouds on the horizon"**

Ensure company's survival through unfettered access to debt financing (Pfandbriefmarkt as safe backstop solution) and leverage KPIs that protect rating and bond covenants.

**"There is no rush"**

Sell with a view towards *price optimization* (asset selection, tax mitigation, disposal structure etc.) not *maximum speed*.

# Of Course, the World Is Not Entirely Black & White

That Is Why We Have Implemented and Initiated Various Actions to Adapt to this Environment

## Reminder: Immediate actions we have taken

### Funding

Investment program put on fully organic funding basis; Commitment to no new equity and no additional net debt in this environment.

### Development

Dev-to-hold mostly switched to Dev-to-sell.

### Capital maintenance

Capital maintenance substantially reduced.

## Update: Progress since H1 2022

### Disposals

Assets identified for sale (MFH & non-core) are being prepared for disposal including market approach.

### JV partnerships

Info memorandums sent for portfolios in Sweden and Baden-Württemberg (*Südewo*). Investor dialogue to be initiated shortly.

### Nursing business

Strategic review by DW underway. Confidentiality agreements sent to investors. Investor dialogue for potential disposal to be initiated shortly.

### Leverage targets

LTV towards lower end of 40-45% range and net debt/EBITDA: ca. 14-15x for now. Targets will be revisited once they have been reached.

# Our Conclusion

We Are Aware of the Equity Capital Market's Concerns; But We Have Conviction on What (Not) to Do

---

## What not to do

- Be pressured into taking action for the sake of taking action
- Define timelines for disposals
- Manage the current share price
- Optimize for the *fastest* outcome
- Force a larger disposal just to set a trigger

## What to do

- Keep eyes on the market but act from position of strength
- Keep flexibility to achieve the best outcome
- Manage the business
- Optimize for the *best* outcome
- Set the *right* trigger by trying to sell
  - ✓ the right assets
  - ✓ to the right buyer/partner
  - ✓ at the right time
  - ✓ out of the right legal entity and
  - ✓ in the right structure

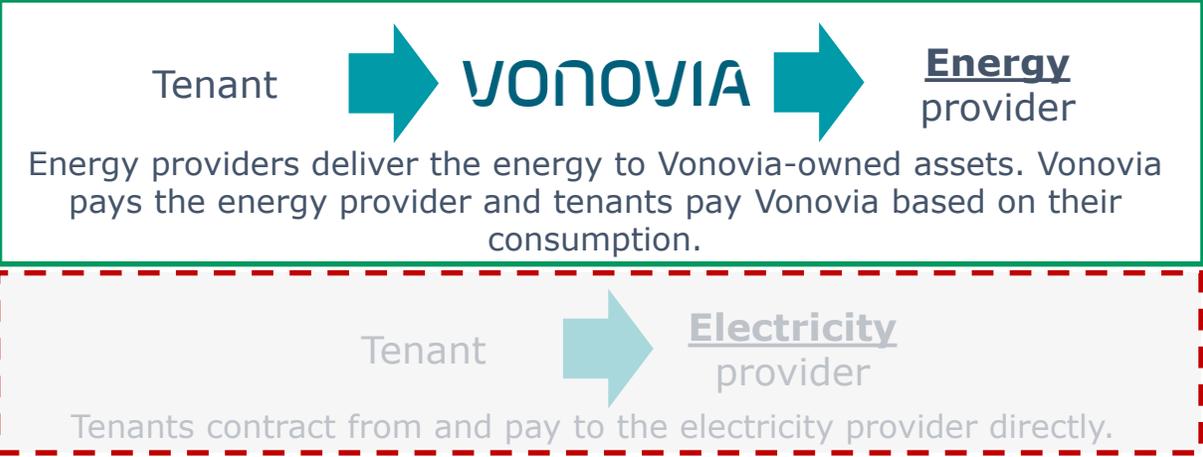
- 
- We are firmly convinced it is in the best interest of our shareholders if we optimize for the best result, not the fastest trigger.
  - Acting under pressure carries the material risk of true value destruction and will lead to self-fulfilling prophecies.
  - If we give in to the pressure that the equity market suggests, we are playing into the hands of potential buyers who are looking to make a quick profit.

# Agenda

1. What (Not) to Do In This Environment
2. Impact from Increasing Energy Prices
3. Vonovia CMD 2022

# Illustrative Payment Flows and Prepayment Mechanics

## Simplified payment flows<sup>1</sup>



- At the beginning of each month, Vonovia withdraws by way of direct debit from tenants’ accounts one contractually agreed lump sum. The tenant has the legal obligation to make all payments in full.
- Payments made by Vonovia to energy providers are largely synchronized with the prepayments made by tenants.
- Vonovia is currently adjusting the prepayments to reflect higher energy costs for 2023 and to minimize any additional lump sum payment at the end of the next 12 months-period. The substantially higher prepayments also safeguard early detection of any payment problems among tenants.

## Illustrative prepayment and recoverable mechanics<sup>1</sup>



Actual consumption over 12-months period is compared to prepayment amounts. Any difference is settled through reimbursements to or additional payment by the tenant.



The actual overall amount for a 12-months period plus estimated cost increases are used as a basis to determine the new prepayment levels for the next 12 months.

<sup>1</sup> Simplified view for illustrative purposes.

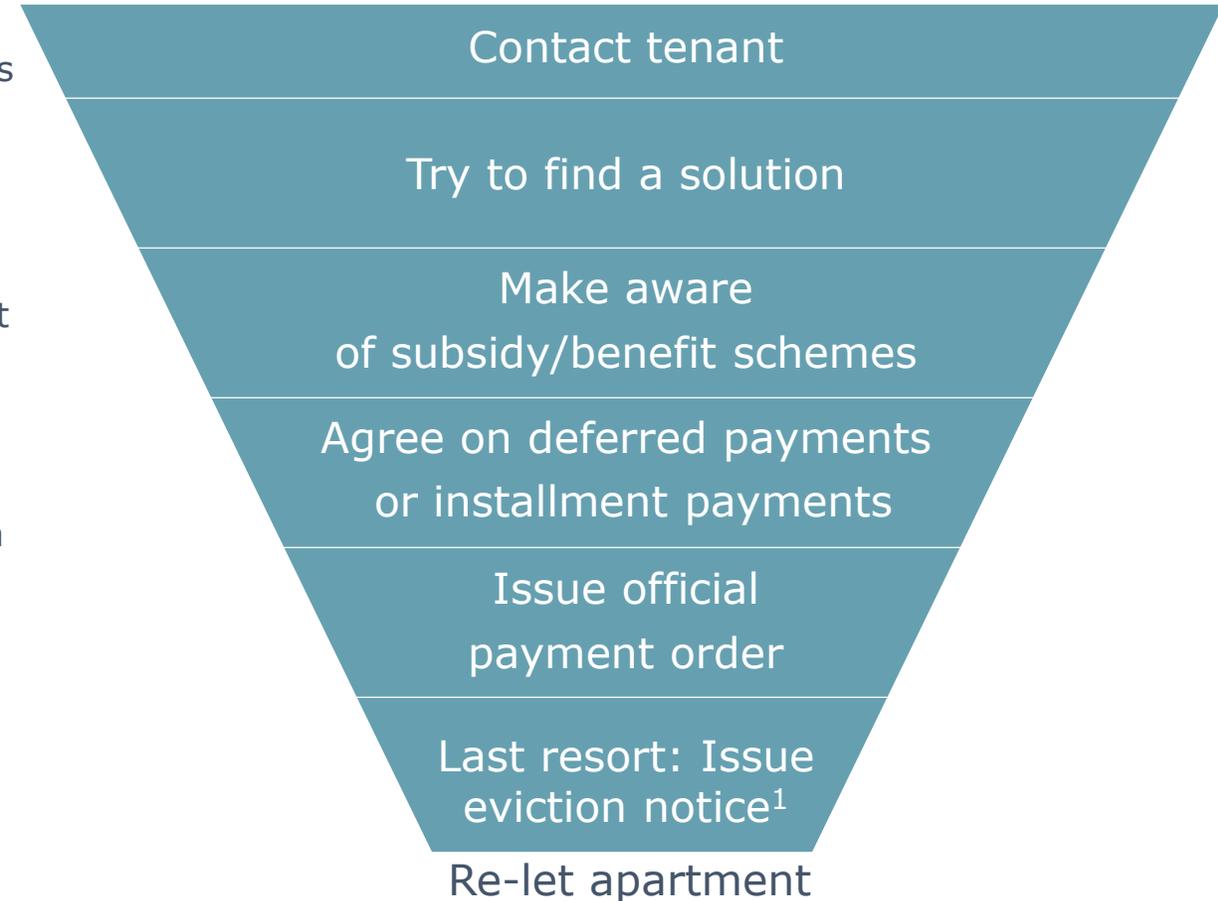


# What If A Tenant Doesn't Pay?

Sequence of Escalating Events Safeguards High Collection Rate; Eviction Only As Measure of Last Resort

In case a tenant is in default on any of the contractually agreed payments (rent, heating, ancillaries), a sequence of escalating events is initiated with the goal of collecting the payment.

- Vonovia contacts the tenant (phone, letter, personal contact) to inquire about the payment default.
- If the tenant qualifies for but does not currently receive government benefits Vonovia provides general education on how to become a beneficiary. This step may also include an agreement on deferred payments or installment payments (individual solutions).
- If a tenant does not qualify for subsidies/benefits and still does not make the payments in spite of individual solutions we offer, Vonovia issues an official payment order.
- If the payment is still not forthcoming and the tenant has accumulated outstanding payments equivalent to two months' rent, Vonovia can issue an eviction notice as a measure of last resort.
- Following the eviction of the tenant, the vacant apartment can be re-let similar to any other vacant apartment.



General payment discipline is high for a reason and expected to remain high. Compared to the increase in energy prices, finding and paying for a comparable apartment is always the inferior alternative in this supply constrained market.

<sup>1</sup>In case outstanding amount equals 2 months' rent.

# Relief Package of German Government

## Broad-based Support to Cope With Price Increases; No Isolated Tenant/Landlord Dilemma

- Following two previous relief packages with a total of €30bn, the German government on September 4, 2022, agreed on an additional relief package with a total volume of €65bn to ease the financial pressure the population faces from higher energy costs and price inflation.
- Similar to the first relief package, the new package focuses on the total population, not on tenants vs. landlords vs. owners.



- (Self-)employed without housing benefits
- Retirees
- Students
- Recipients of welfare/housing benefits

Tenant group	Housing benefit reform <sup>2</sup>	One-off payment	Reduced VAT on gas	No "EEG" surcharge	CO2 tax moratorium	Short-term labor allowance	Increased social welfare benefits	Adjustment to income tax brackets	Tax-free bonus payments by employers	Subsidized public transport ticket
(Self-)employed <u>without</u> housing benefits	●	●	●	●	●	●		●	●	●
Retirees	●	●	●	●	●					●
Students	●	●	●	●	●					●
Recipients of welfare/housing benefits (=housing costs covered by government)	● <sup>3</sup>		Irrelevant as costs are fully covered by the state				●			●

<sup>1</sup> Percentages are rough estimates. We know the status when a tenant moves in. However, once the tenant has signed the lease agreement, data protection regulation precludes us from keeping their status up to date. <sup>2</sup> A larger part of the population is expected to become eligible for housing benefits. <sup>3</sup> Benefits to be increased including built-in inflation adjustment

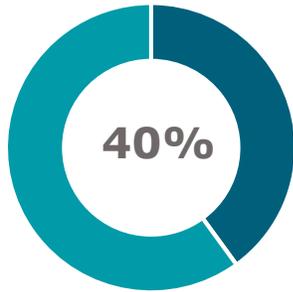
# Agenda

1. What (Not) to Do In This Environment
2. Impact from Increasing Energy Prices
3. Vonovia CMD 2022

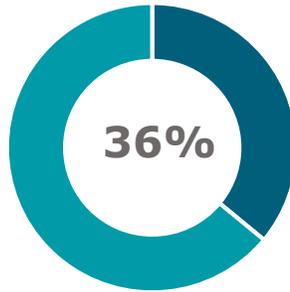
# Decarbonization and Energy Transition in Real Estate

It Matters!

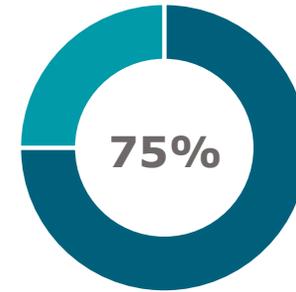
Buildings  
account  
for...



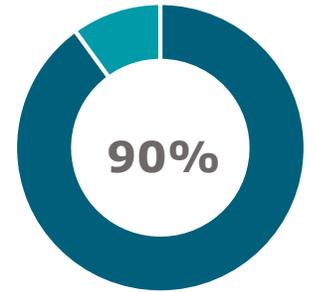
...of energy consumed



...of energy-related  
greenhouse gas emissions



of EU buildings are not  
energy efficient



of EU buildings are expected  
to still be standing in 2050

“At the current pace the decarbonization of the building sector would require centuries.

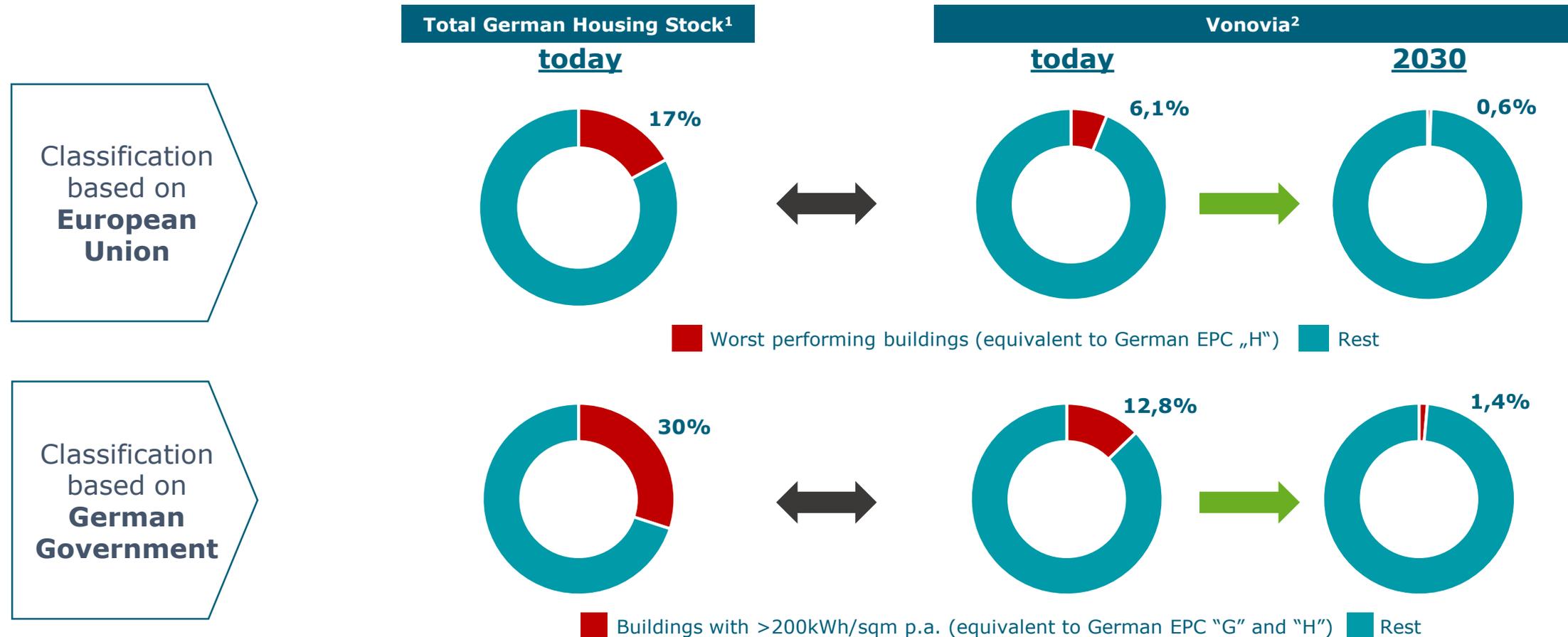
Building renovation, including a shift towards emissions-free heating systems is

therefore a key goal.” (European Union)

# Vonovia Is Ahead Thanks to Early Start and Climate Path

Compliant with EU and German Regulation by 2030

Regulations by the German government and the European Union call for Substantial Energy efficiency improvements by 2030.



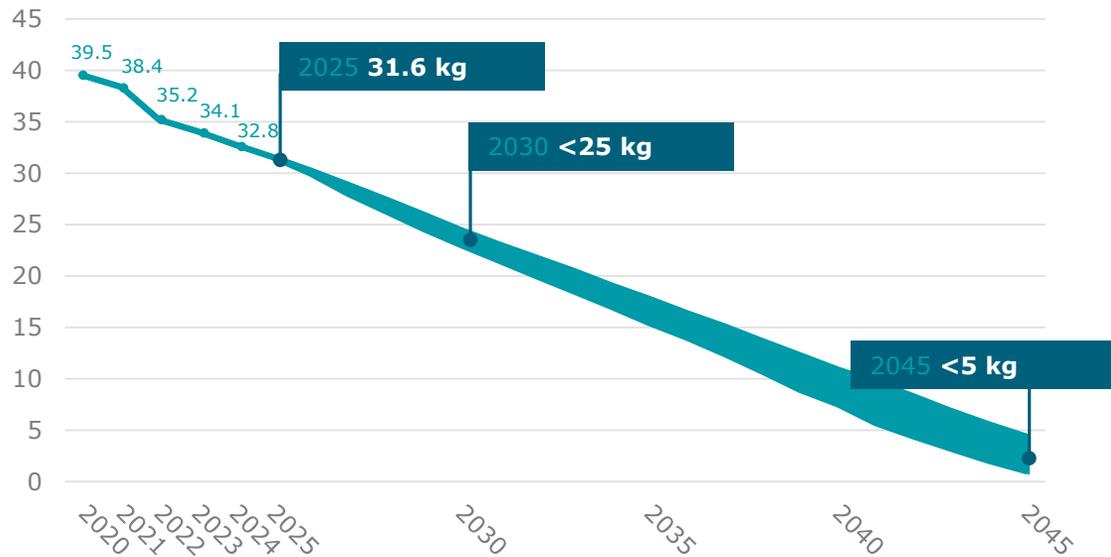
<sup>1</sup> Source: dena [German Energy Agency], ifeu, Prognos, Öko-Institut, Navigant, adelphi (2019): Vorbereitende Untersuchungen zur Erarbeitung einer Langfristigen Renovierungsstrategie nach Art 2a der EU-Gebäuderichtlinie RL2018/844 (EPBD), August 2019. <sup>2</sup> German portfolio.

# Vonovia Is On A Pathway for Near CO<sub>2</sub> Neutrality In Its Portfolio

Science-based Decarbonization Roadmap with Measurable Interim Targets

- Accelerated decarbonization with near CO<sub>2</sub> neutrality in 2045.
- Following CRREM MFH 1.5 degree pathway.
- Including Scope 1, 2 and 3.3.

CO2 intensity in kg CO2e/sqm per year<sup>1</sup>



The 3 levers for our climate path

1

Continue **deep renovation**.

2

**Replace conventional heating** with hybrid systems and heat pumps.

**PV** on all suitable roofs.

Own local **heating networks in Urban Quarters** powered with renewable energy.

3

**Transformation of the energy sector** towards carbon-free district heating and green electricity.

<sup>1</sup> Includes scopes 1 & 2 as well as scope 3.3 "Fuel- and energy-related activities upstream;" referring to German building stock excl. Deutsche Wohnen. Development of energy sector according to Scenario Agora energiewende KNDE 20245; For comparison: CRREM pathway MFH 1.5° DE 2045=5.4kg CO<sub>2</sub>e/sqm per year (07/2021); Climate pathway development supported by Fraunhofer ISE. Per-sqm values based on rental area, not total floor space.

# Disclaimer

---

This presentation has been specifically prepared by Vonovia SE and/or its affiliates (together, "Vonovia") for internal use. Consequently, it may not be sufficient or appropriate for the purpose for which a third party might use it.

This presentation has been provided for information purposes only and is being circulated on a confidential basis. This presentation shall be used only in accordance with applicable law, e.g. regarding national and international insider dealing rules, and must not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by the recipient to any other person. Receipt of this presentation constitutes an express agreement to be bound by such confidentiality and the other terms set out herein.

This presentation includes statements, estimates, opinions and projections with respect to anticipated future performance of Vonovia ("forward-looking statements") which reflect various assumptions concerning anticipated results taken from Vonovia's current business plan or from public sources which have not been independently verified or assessed by Vonovia and which may or may not prove to be correct. Any forward-looking statements reflect current expectations based on the current business plan and various other assumptions and involve significant risks and uncertainties and should not be read as guarantees of future performance or results and will not necessarily be accurate indications of whether or not such results will be achieved. Any forward-looking statements only speak as at the date the presentation is provided to the recipient. It is up to the recipient of this presentation to make its own assessment of the validity of any forward-looking statements and assumptions and no liability is accepted by Vonovia in respect of the achievement of such forward-looking statements and assumptions.

Vonovia accepts no liability whatsoever to the extent permitted by applicable law for any direct, indirect or consequential loss or penalty arising from any use of this presentation, its contents or preparation or otherwise in connection with it.

No representation or warranty (whether express or implied) is given in respect of any information in this presentation or that this presentation is suitable for the recipient's purposes. The delivery of this presentation does not imply that the information herein is correct as at any time subsequent to the date hereof.

Vonovia has no obligation whatsoever to update or revise any of the information, forward-looking statements or the conclusions contained herein or to reflect new events or circumstances or to correct any inaccuracies which may become apparent subsequent to the date hereof.

This presentation does not, and is not intended to, constitute or form part of, and should not be construed as, an offer to sell, or a solicitation of an offer to purchase, subscribe for or otherwise acquire, any securities of the Company nor shall it or any part of it form the basis of or be relied upon in connection with or act as any inducement to enter into any contract or commitment or investment decision whatsoever.

This presentation is neither an advertisement nor a prospectus and is made available on the express understanding that it does not contain all information that may be required to evaluate, and will not be used by the attendees/recipients in connection with, the purchase of or investment in any securities of the Company. This presentation is selective in nature and does not purport to contain all information that may be required to evaluate the Company and/or its securities. No reliance may or should be placed for any purpose whatsoever on the information contained in this presentation, or on its completeness, accuracy or fairness.

This presentation is not directed to or intended for distribution to or use by, any person or entity that is a citizen or resident or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would require any registration or licensing within such jurisdiction.

Neither this presentation nor the information contained in it may be taken, transmitted or distributed directly or indirectly into or within the United States, its territories or possessions. This presentation is not an offer of securities for sale in the United States. The securities of the Company have not been and will not be registered under the US Securities Act of 1933, as amended (the "Securities Act") or with any securities regulatory authority of any state or other jurisdiction of the United States. Consequently, the securities of the Company may not be offered, sold, resold, transferred, delivered or distributed, directly or indirectly, into or within in the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and in compliance with any applicable securities laws of any state or other jurisdiction of the United States unless registered under the Securities Act.

Tables and diagrams may include rounding effects.