Supplementary information for

Fuelling hydrogen futures? A trust-based model of social acceptance

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1 Supplementary Note 1: Financial involvement and choice perceptions

Fig. S1 reports the composition of the sample in relation to levels of involvement in financial decision-making, and the level of importance attributed towards choosing between household heating and cooking technologies.

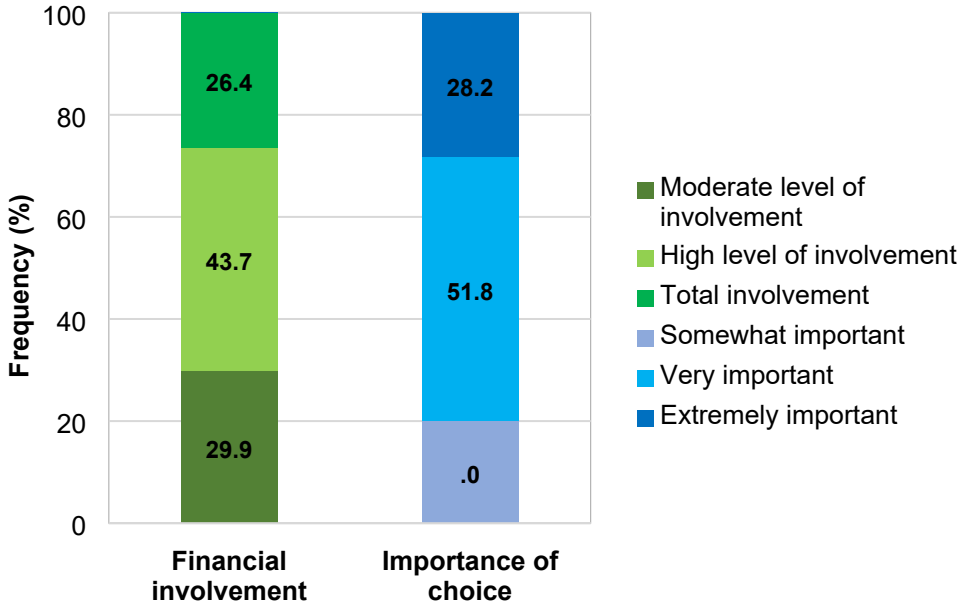

Fig. S1 Financial involvement in appliance purchase and choice perceptions across sample.

2 Supplementary Note 2: Survey questions and supporting literature

Table S1 provides full details of the survey questions pertaining to each construct and its respective indicators, as well as the scales employed, in addition to the supporting literature for deriving each item.

Table S1. Questionnaire details and literature sources.

Construct	Indicator	Question items and framing	Scale	Supporting literature
Public Trust (PT)		How much trust do you have in the following stakeholders when it comes to supporting a cost-effective, efficient, and fair transition to hydrogen homes?	0–10: No trust–Total trust	[1–6]
	PT1	Central government		
	PT2	Regional authorities		
	PT3	Local councils		
	PT4	Fuel/gas supply companies		
	PT5	Electricity/gas suppliers		
	PT6	Renewable energy producers		
	PT7	Trade bodies or trade associations		
	PT8	Boiler manufacturers		
	PT9	Gas engineers and technicians		
	PT10	Non-governmental organisations		
	PT11	Universities		
	PT12	Other research institutes or organisations		
	PT13	Gas distribution network operators		
	PT14	Financial institutes		
	PT15	Ofgem		
	PT16	The media		
Technology Perceptions (TP)		Please evaluate the following statements about a hydrogen boiler and hydrogen hob**:**	0–10: Low expectation – High expectation	[7–14]
	TP1	I expect a hydrogen boiler to provide a higher level of thermal comfort than a natural gas boiler (i.e.		

		satisfactory level and distribution of heat)		
	TP2	I expect a hydrogen boiler to be more energy efficient than a natural gas boiler		
	TP3	I expect a hydrogen boiler to provide a smarter heating system than a gas boiler		
	TP4	I expect a hydrogen hob to perform more efficiently than a natural gas hob		
	TP5	I expect a hydrogen hob to provide a smarter cooking system than a natural gas hob		
Safety Perceptions (SP)		Please evaluate your current safety perceptions of hydrogen compared to natural gas for the following:	0–10: Less safe – More safe	[4,5,7,15–20]
	SP1	Hydrogen boilers		
	SP2	Hydrogen hobs		
	SP3	Hydrogen pipelines (i.e. transport/transmission)		
	SP4	Underground storage of hydrogen gas		
	SP5	Overall, how do you perceive the safety level of hydrogen compared to natural gas in terms of production, storage, transportation, and domestic use?		
Production Perceptions (PP)	PP1	What is your attitude towards the UK government supporting blue hydrogen production in the short-term (i.e. up to 2030)?	0–10: Opposed – Supportive	[4,5,21–24]
	PP2	What is your attitude towards the UK government supporting blue hydrogen production over the long-term (i.e. after 2030)?		
	PP3	What is your attitude towards the UK government supporting green hydrogen production in the short-term (i.e. up to 2030)?		
	PP4	What is your attitude towards the UK government supporting green hydrogen production over the long-term (i.e. after 2030)?		
	PP5	How do you feel about the government's twin-track strategy? (i.e. with a role for blue and green hydrogen)		
Perceived Community	PCB1	What is your expectation for hydrogen homes delivering	0–10:	[2,6,25–28]

Benefits (PCB)		economic benefits such as job opportunities and income security?	Low – High expectation	
	PCB2	What is your expectation for hydrogen homes delivering social benefits such as reduced levels of fuel poverty and improved health?		
	PCB	What is your expectation for hydrogen homes delivering environmental benefits such lower carbon emissions and better air quality?		
Domestic Hydrogen Acceptance (DHA)		Please evaluate your current level of support or opposition for the following:	0–10: Opposed–Supportive	[29–32]
	DHA1	Domestic hydrogen becoming a critical part of the UK's energy future		
	DHA2	Hydrogen replacing natural gas in your local area before 2030		
	DHA3	Switching your home to both hydrogen heating and hydrogen cooking before 2030		
Willingness to Adopt H2 before 2030 (WTA)	WTA1	What is your level of willingness to switch to a hydrogen boiler before 2030?	1–5: Not willing at all – Extremely willing	[29–32]
	WTA2	What is your level of willingness to switch to a hydrogen hob before 2030?		
	WTA3	What is your level of willingness to switch to a hydrogen home before 2030? (i.e. both hydrogen heating and cooking)		

3 Supplementary Note 3: Sample characteristics and comparison to UK population

Table S2 describes the breakdown of each consumer sub-group composing our survey sample (N =1845). The ideal target was to secure an equally balanced representation among three of sub-groups (i.e. MEG, VEG, FSG), alongside a larger Baseline Group (BLG) of ~40%. Higher occurrences of incomplete answers and straight-lining responses resulted in a final sample of 677 for the BLG (~36.7%). During the data collection, the Very Engaged Group (VEG) proved harder to reach, leading to partial under-representation (N = 331, 17.9%). By comparison, the Moderately Engaged Group (MEG) was easier to secure and somewhat over-represented (24.8%). Finally, the Fuel Stress Group (FSG) was in line with the original quotas (20.5%).

Table S2. Consumer sub-groups composing the survey sample.

Socio-demographic variable	BLG (N = 677)	MEG (N = 458)	VEG (N = 331)	FSG (N = 379)	Standard deviation	Full sample (N = 1845)	UK population	Difference (%)
Age								
18-34	34.1	31.7	38.7	39.8	3.82	35.5	32.6	+2.9
35-54	41.7	37.3	33.2	42.2	4.22	39.2	30.6	+8.6
55+	24.2	31.0	28.1	17.9	5.67	25.3	36.8	-11.5
Gender								
Male	36.8	42.6	56.5	47.2	8.32	43.9	48.8	-4.9
Female	63.2	57.4	43.5	52.8	8.32	56.1	51.2	+4.9
Other								
Housing tenure								
Owned outright	34.7	36.0	47.4	34.3	6.24	37.2	57.1	-19.9
Mortgage owner	65.3	64.0	52.6	65.7	6.24	62.8	42.9	+19.9
Housing type								
Flat, apartment or bungalow	12.3	9.2	16.6	12.4	3.04	12.3	30.0	-17.7
Detached house	29.1	30.8	30.8	25.3	2.59	29.1	18.0	+11.1
Semi-detached house	36.9	42.1	35.3	39.6	3.00	38.5	25.0	+13.5
Terrace house	21.7	17.9	17.2	22.7	2.73	20.2	27.0	-6.8
No. of occupants								
1	11.7	10.0	9.1	7.9	1.60	10.0	n/a	
2	30.6	32.3	26.0	30.6	2.70	30.2	n/a	

3+	57.8	57.6	65.0	61.5	3.51	59.8	n/a	
Education level								
GCSE/O-Level or lower	24.2	17.9	18.7	24.5	3.51	21.7	n/a	
Vocational/NVQ	27.0	25.8	17.5	23.2	4.23	24.2	n/a	
Postgraduate qualification	17.7	23.1	26.3	21.4	3.58	21.4	n/a	
Degree or equivalent	31.0	33.2	37.5	30.9	3.09	32.7	n/a	
Annual income bracket (before tax)								
Less than £23,500	30.1	27.1	16.9	28.0	5.89	26.6	n/a	
More than £23,500 but less than £31,500	20.7	19.4	16.9	26.1	3.88	20.8	n/a	
More than £31,500 but less than £41,500	18.9	18.6	19.0	19.0	0.19	18.9	n/a	
More than £41,500 but less than £62,500	20.7	23.1	23.9	19.8	1.94	21.7	n/a	
More than £62,500	9.6	11.8	23.3	7.1	7.16	12.1	n/a	
Location								
Southwest and Wales	11.7	15.3	11.5	11.6	1.85	12.5	13.4	-0.9
Midlands and East of England	27.8	25.8	22.1	25.3	2.36	25.7	26.2	-0.5
Southeast and London	26.0	28.6	35.3	22.2	5.52	27.5	27.2	+0.3
North of England and Scotland	34.6	30.3	31.1	40.9	4.83	34.2	33.0	+1.2
Area type								
Inner City or industrial	6.5	7.6	12.7	11.6	3.01	8.9	n/a	
Suburban	54.7	56.3	44.7	48.8	5.36	52.1	n/a	
Urban	19.1	17.7	28.4	24.8	4.99	21.6	n/a	
Rural	19.8	18.3	14.2	14.8	2.71	17.4	n/a	

Source: Authors' compilation based on[33–35].

[a] n/a denotes the decision to exclude these variables when setting quotas, therefore population data is not reported here.

4 Supplementary Note 4: The dynamics of public trust in the domestic hydrogen transition

Fig. S2 reports the individual breakdown for results provided in Fig. 6 (Section 6.1) of the main analysis. Across all trust metrics, the Very technology and environmentally Engaged Group (VEG) has the highest score, followed by the Moderately technology and environmentally Engaged Group (MEG), which is consistent with Fig. 6. Furthermore, the observed equivalence between the Fuel Stressed Group (FSG) and Baseline Group (BLG) holds consistent across each indicator.

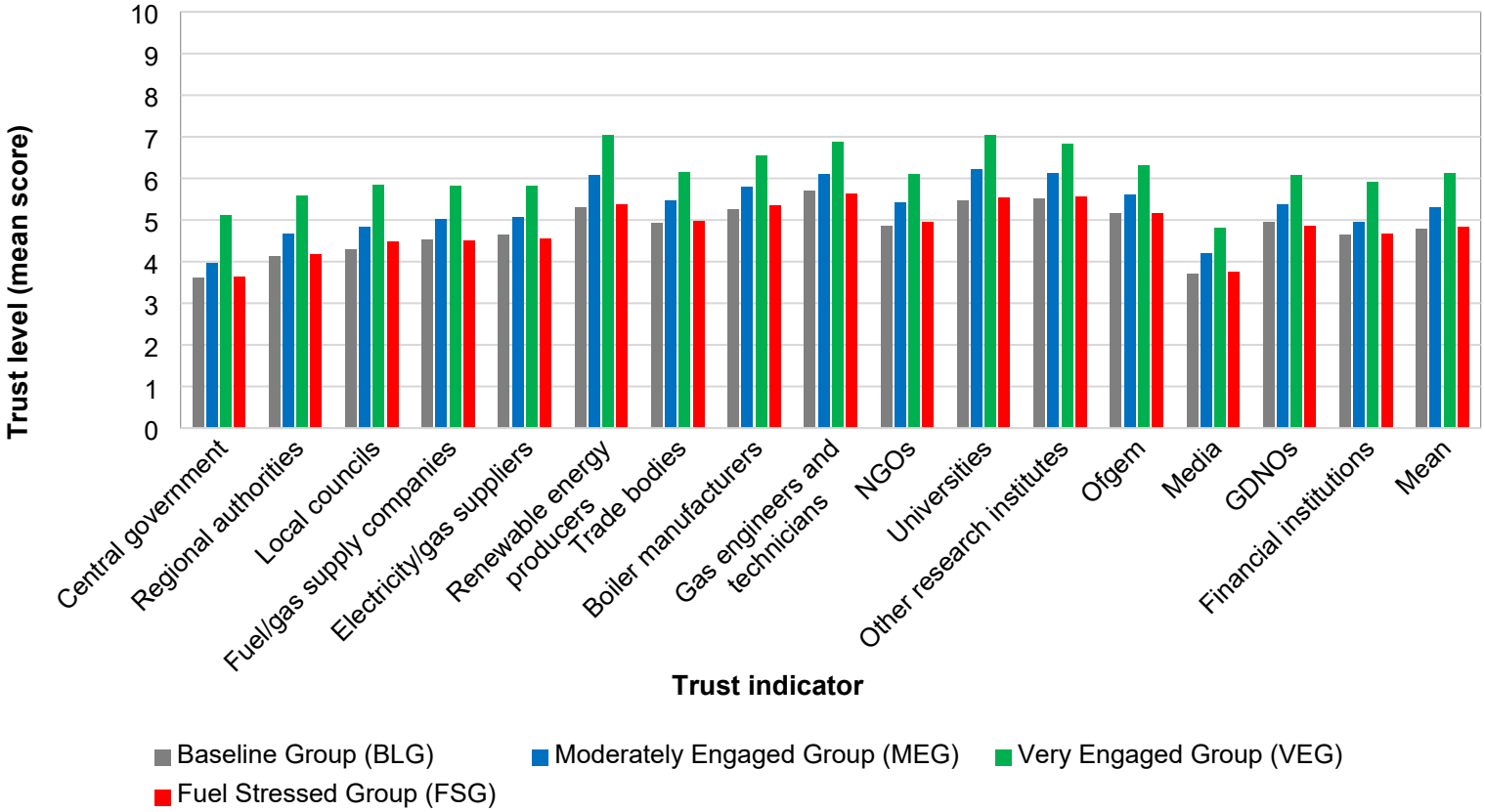

Fig. S2 Mean score for indicators predicting public trust in the domestic hydrogen transition by consumer sub-groups.

5 Supplementary Note 5: Measurement model assessment for public trust construct

Fig. S3 presents the PLS-SEM output for validating the higher-order construct, Public Trust (PT), following the guidelines presented by Sarstedt and colleagues.[36] The disjoint two-stage approach was applied whereby the latent variable scores for each lower-order construct (trust in the government, trust in the energy sector, trust in product and service quality, trust in R&D, and social trust) are calculated and used as indicators for the newly formed first-order construct, Public Trust (PT). The procedure validated the average variance extracted (AVE) in support of convergent validity, while discriminant validity was also established, alongside item reliability and internal consistent reliability.

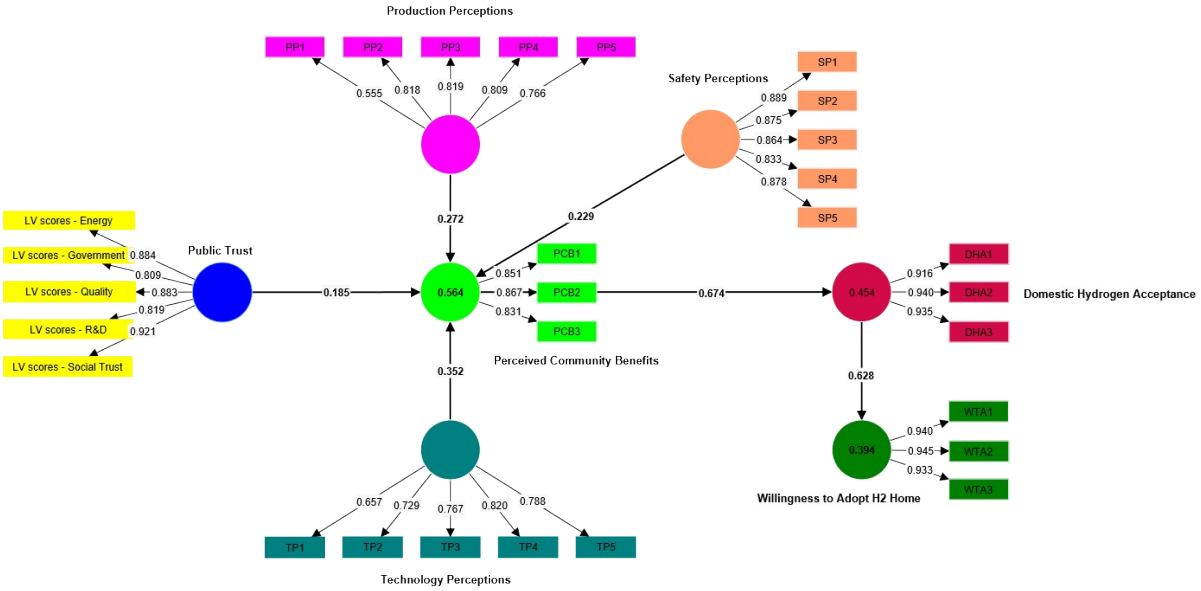

Fig. S3 Measurement model assessment for reflective-formative construct (PT)

6 Supplementary Note 6: Statistical tests for validating sample size specifications

Supplementary Note 5 provides results on sample size requirements for testing effect sizes. We used G*Power software to verify the parameters. Since our sample was relatively large (N = 1845), it was suitable for PLS-SEM, however, we checked the results from G*Power to clarify the reliability of (small) effect sizes. Fig. S4a provides the results for the model when excluding the sub-constructs of public trust, while Fig. S4b provides the alternative results when included. In both cases, the sample size is more than adequate for detecting an effect size of 0.02 at the 95% significance level.

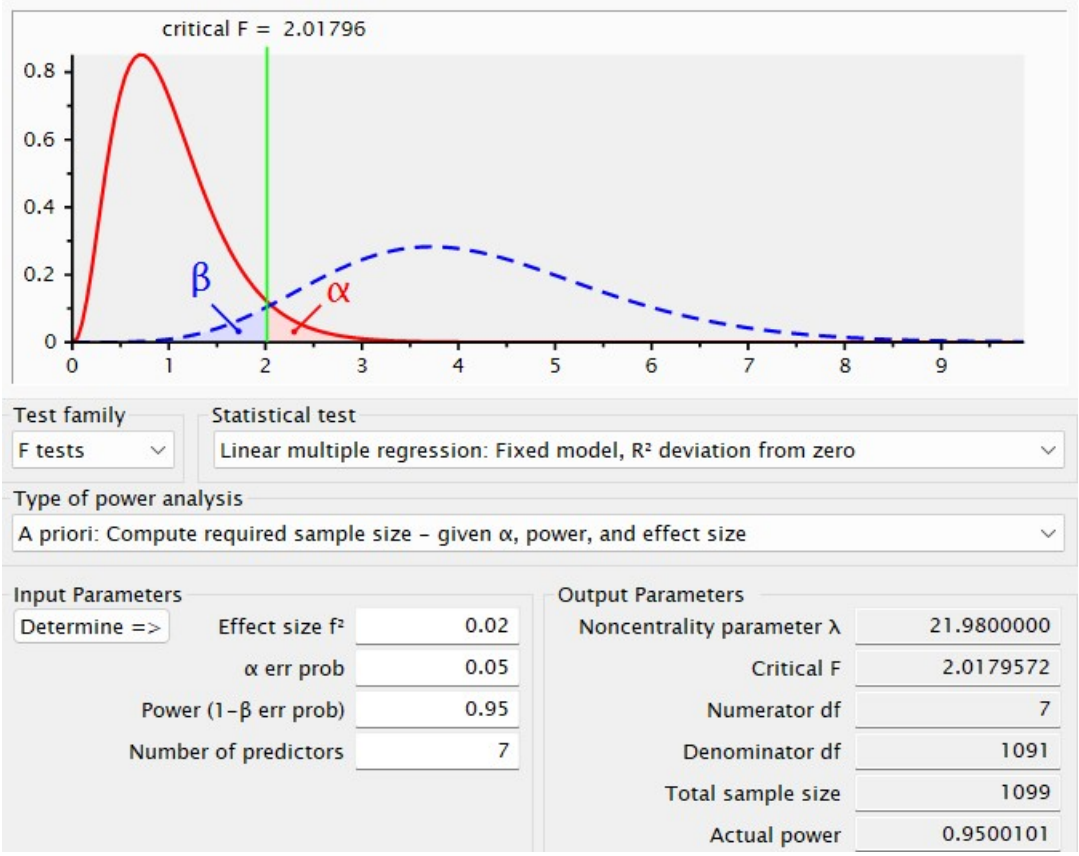

Fig S4a. Power test to determine the minimum sample size for an effect size of 0.02 at 95% significance (excluding sub-constructs of Public Trust).

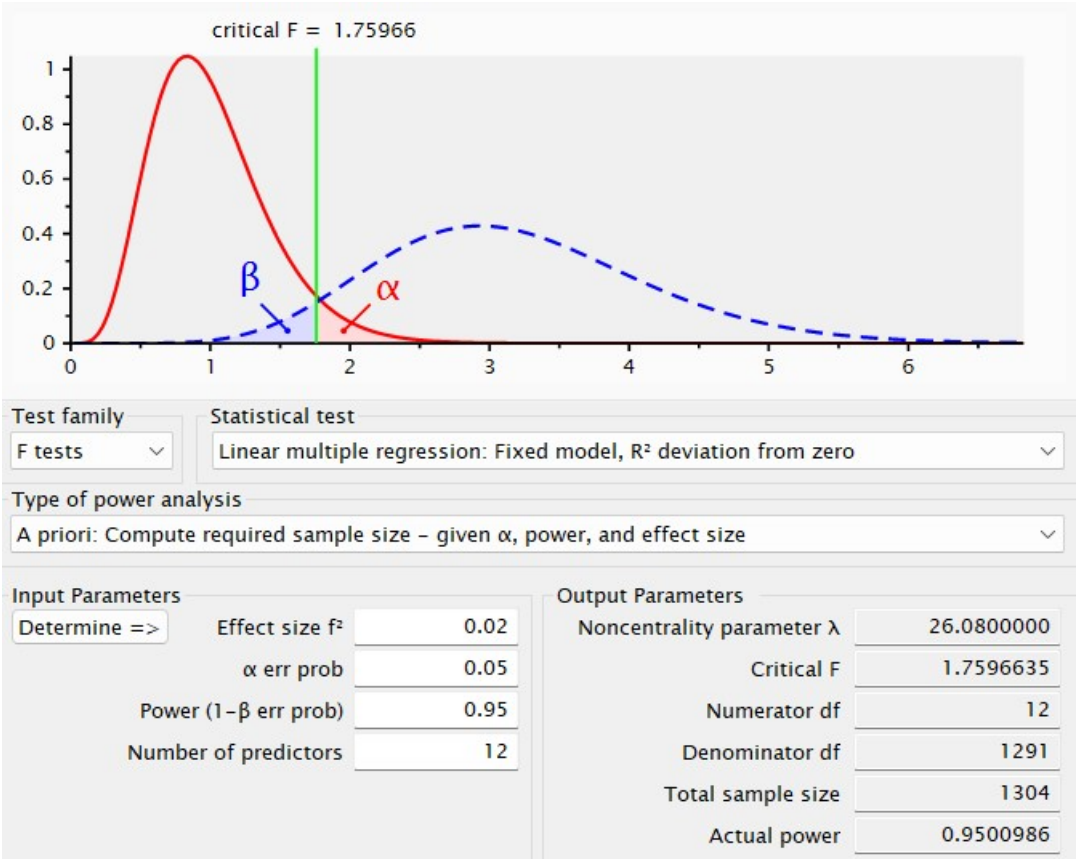

Fig S4b. Power test to determine the minimum sample size for an effect size of 0.02 at 95% significance (including sub-constructs of Public Trust).

7 Supplementary Note 7: Common method bias

Table S3 tests each indicator for common method bias (CMB) across the full sample, which was ruled out by the results.

Table S3. Harman single factor test for common method bias.

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.66	36.649	36.649	14.66	**36.649**	**36.649**
2	4.126	10.316	46.965			
3	2.656	6.641	53.606			
4	2.063	5.157	58.763			
5	1.791	4.477	63.24			
6	1.273	3.182	66.422			
7	1.041	2.601	69.023			
8	0.866	2.166	71.189			
9	0.782	1.955	73.144			
10	0.662	1.656	74.8			
11	0.651	1.627	76.427			
12	0.626	1.566	77.993			
13	0.586	1.465	79.458			
14	0.548	1.37	80.828			
15	0.514	1.284	82.112			
16	0.468	1.169	83.281			
17	0.451	1.127	84.408			
18	0.429	1.072	85.48			
19	0.421	1.052	86.532			
20	0.378	0.946	87.478			
21	0.358	0.895	88.373			
22	0.349	0.872	89.245			
23	0.341	0.854	90.099			
24	0.331	0.828	90.927			
25	0.32	0.799	91.727			
26	0.31	0.776	92.502			
27	0.291	0.726	93.229			
28	0.28	0.699	93.928			
29	0.276	0.689	94.617			
30	0.272	0.68	95.297			
31	0.252	0.631	95.928			
32	0.241	0.602	96.53			
33	0.211	0.526	97.056			
34	0.198	0.495	97.551			
35	0.195	0.487	98.038			
36	0.182	0.455	98.494			
37	0.169	0.424	98.917			

38	0.168	0.42	99.337
39	0.141	0.352	99.69
40	0.124	0.31	100

Extraction Method: Principal Component Analysis

8 Supplementary Note 8: Skewness and kurtosis

Table S4 reports the skewness and kurtosis for each indicator to verify the suitability of PLS-SEM, as discussed in Section 6.2.

Table S4. Results for skewness and kurtosis.

Indicator	Kurtosis	Skewness
GOV1	-0.943	0.141
GOV2	-0.629	-0.035
GOV3	-0.750	-0.071
NRG1	-0.676	-0.222
NRG2	-0.709	-0.210
NRG3	-0.381	-0.469
QUAL1	-0.316	-0.322
QUAL2	-0.339	-0.322
QUAL3	-0.209	-0.465
R&D1	-0.364	-0.291
R&D2	-0.291	-0.438
R&D3	-0.163	-0.469
ST1	-0.520	-0.321
ST2	-0.548	-0.207
ST3	-0.473	-0.398
ST4	-0.824	0.158
PP1	-0.190	-0.116
PP2	-0.442	-0.269
PP3	-0.408	-0.464
PP4	0.007	-0.141
PP5	0.010	-0.049
SP1	-0.231	-0.148
SP2	-0.228	-0.202
SP3	-0.262	-0.157
SP4	-0.347	-0.152
SP5	-0.128	-0.255
TP1	-0.210	-0.516
TP2	0.896	-1.205
TP3	0.177	-0.885
TP4	-0.039	-0.578
TP5	-0.019	-0.479
PCB1	0.105	-0.423
PCB2	0.046	-0.462
PCB3	0.060	-0.577
DHA1	0.007	-0.483
DHA2	-0.029	-0.510
DHA3	-0.022	-0.543
WTA1	-0.359	0.085
WTA2	-0.419	0.179
WTA3	-0.467	0.207

9 Supplementary Note 9: Results for cross-loadings

Table S5 shows that indicator loadings were highest for the targeted constructs composing the model.

Table S5: Cross loadings between indicators composing the trust-based model of domestic hydrogen acceptance and adoption.

	DHA	NRG	GOV	PCB	PP	PT	QUAL	R&D	SP	ST	TP	WTA
DHA1	**0.916**	0.474	0.364	0.635	0.598	0.543	0.535	0.540	0.423	0.443	0.343	0.531
DHA2	**0.940**	0.445	0.357	0.629	0.560	0.522	0.508	0.537	0.456	0.422	0.372	0.593
DHA3	**0.935**	0.472	0.404	0.617	0.515	0.545	0.504	0.534	0.451	0.453	0.351	0.625
GOV1	0.306	0.621	**0.877**	0.234	0.249	0.718	0.513	0.412	0.353	0.686	0.077	0.228
GOV2	0.407	0.662	**0.936**	0.360	0.316	0.790	0.603	0.530	0.421	0.699	0.154	0.290
GOV3	0.378	0.606	**0.902**	0.336	0.248	0.741	0.544	0.528	0.374	0.644	0.134	0.291
NRG1	0.401	**0.925**	0.660	0.303	0.293	0.823	0.658	0.493	0.354	0.797	0.118	0.259
NRG2	0.391	**0.934**	0.659	0.304	0.307	0.831	0.665	0.515	0.353	0.797	0.135	0.235
NRG3	0.566	**0.851**	0.567	0.478	0.425	0.780	0.663	0.620	0.373	0.662	0.268	0.363
PCB1	0.529	0.336	0.322	**0.851**	0.416	0.423	0.425	0.404	0.474	0.351	0.482	0.359
PCB2	0.548	0.348	0.339	**0.867**	0.398	0.436	0.433	0.415	0.522	0.359	0.501	0.381
PCB3	0.636	0.329	0.221	**0.831**	0.538	0.392	0.439	0.439	0.412	0.282	0.462	0.398
PP1	0.266	0.259	0.268	0.257	**0.555**	0.302	0.271	0.230	0.271	0.281	0.159	0.155
PP2	0.489	0.251	0.188	0.446	**0.818**	0.303	0.331	0.327	0.233	0.223	0.222	0.324
PP3	0.522	0.265	0.149	0.481	**0.819**	0.296	0.320	0.342	0.259	0.214	0.279	0.309
PP4	0.535	0.379	0.329	0.447	**0.809**	0.420	0.387	0.383	0.316	0.347	0.234	0.350
PP5	0.399	0.286	0.253	0.342	**0.766**	0.337	0.311	0.308	0.279	0.303	0.147	0.249
QUAL1	0.492	0.657	0.604	0.459	0.373	0.799	**0.873**	0.594	0.406	0.720	0.259	0.264
QUAL2	0.491	0.672	0.537	0.450	0.391	0.775	**0.899**	0.549	0.387	0.685	0.244	0.281
QUAL3	0.488	0.613	0.480	0.444	0.369	0.735	**0.885**	0.572	0.357	0.622	0.279	0.269
R&D1	0.457	0.549	0.514	0.410	0.344	0.709	0.554	**0.842**	0.362	0.641	0.219	0.285
R&D2	0.524	0.480	0.428	0.435	0.376	0.649	0.539	**0.866**	0.277	0.533	0.219	0.331
R&D3	0.519	0.521	0.462	0.439	0.379	0.687	0.581	**0.887**	0.321	0.562	0.240	0.331
SP1	0.429	0.341	0.366	0.512	0.322	0.418	0.404	0.342	**0.889**	0.361	0.370	0.297

SP2	0.415	0.327	0.354	0.491	0.297	0.395	0.370	0.317	**0.875**	0.343	0.362	0.289
SP3	0.403	0.339	0.359	0.465	0.294	0.399	0.365	0.314	**0.864**	0.353	0.334	0.291
SP4	0.385	0.348	0.365	0.437	0.296	0.404	0.366	0.303	**0.833**	0.366	0.300	0.283
SP5	0.436	0.374	0.396	0.482	0.313	0.433	0.375	0.334	**0.878**	0.394	0.345	0.320
ST1	0.443	0.831	0.656	0.352	0.333	0.831	0.694	0.535	0.353	**0.847**	0.147	0.261
ST2	0.383	0.693	0.643	0.328	0.270	0.795	0.678	0.545	0.387	**0.852**	0.177	0.233
ST3	0.429	0.637	0.543	0.374	0.316	0.754	0.637	0.596	0.329	**0.818**	0.247	0.204
ST4	0.289	0.564	0.618	0.212	0.226	0.693	0.492	0.539	0.304	**0.774**	0.081	0.196
TP1	0.209	0.144	0.151	0.319	0.139	0.184	0.177	0.156	0.263	0.167	**0.657**	0.169
TP2	0.296	0.114	0.024	0.407	0.222	0.144	0.213	0.177	0.238	0.096	**0.729**	0.181
TP3	0.298	0.157	0.084	0.420	0.208	0.192	0.229	0.211	0.265	0.149	**0.767**	0.198
TP4	0.315	0.134	0.094	0.496	0.259	0.186	0.236	0.204	0.339	0.139	**0.820**	0.181
TP5	0.307	0.170	0.166	0.469	0.215	0.235	0.246	0.230	0.371	0.204	**0.788**	0.183
PT1	0.443	0.831	0.656	0.352	0.333	**0.831**	0.694	0.535	0.353	0.847	0.147	0.261
PT2	0.566	0.851	0.567	0.478	0.425	**0.780**	0.663	0.620	0.373	0.662	0.268	0.363
PT3	0.383	0.693	0.643	0.328	0.270	**0.795**	0.678	0.545	0.387	0.852	0.177	0.233
PT4	0.429	0.637	0.543	0.374	0.316	**0.754**	0.637	0.596	0.329	0.818	0.247	0.204
PT5	0.289	0.564	0.618	0.212	0.226	**0.693**	0.492	0.539	0.304	0.774	0.081	0.196
WTA1	0.589	0.293	0.279	0.419	0.354	0.332	0.276	0.348	0.311	0.257	0.216	**0.940**
WTA2	0.579	0.284	0.273	0.421	0.343	0.323	0.280	0.337	0.325	0.238	0.237	**0.945**
WTA3	0.601	0.309	0.288	0.420	0.365	0.348	0.307	0.341	0.325	0.273	0.226	**0.933**

10 Supplementary Note 10: Assessment of discriminant validity.

Following the heterotrait-monotrait (HTMT) ratio of correlations, Supplementary Note 10 provides an additional check of discriminant validity via the Fornell Larcker criteria.

Table S5: Fornell Larcker results for assessment of discriminant validity.

	DHA	NRG	GOV	PCB	PP	PT	QUAL	R&D	SP	ST	TP	WTA
DHA	0.930											
NRG	0.498	0.904										
GOV	0.403	0.696	0.905									
PCB	0.674	0.397	0.344	0.850								
PP	0.599	0.376	0.300	0.533	0.760							
PT	0.577	0.897	0.829	0.490	0.432	0.759						
QUAL	0.554	0.732	0.612	0.509	0.426	0.870	0.886					
R&D	0.577	0.598	0.543	0.494	0.423	0.790	0.646	0.865				
SP	0.477	0.398	0.423	0.551	0.351	0.472	0.434	0.372	0.868			
ST	0.472	0.833	0.747	0.388	0.350	0.935	0.764	0.671	0.418	0.824		
TP	0.382	0.190	0.136	0.567	0.281	0.249	0.294	0.261	0.395	0.199	0.754	
WTA	0.628	0.314	0.298	0.447	0.377	0.356	0.306	0.364	0.341	0.273	0.241	0.940

11 Supplementary Note 11: Collinearity statistics for the inner model

Table S6 confirms that multi-collinearity was ruled out for most constructs. The comparatively elevated value for the relationship between social trust and public trust is somewhat anticipated given the association between each factor, but still below the less stringent threshold of 5.0. The reported score supports the rationale of operationalising social trust and public trust as distinct empirical constructs within thew proposed model.

Table S6. Variance inflation factor values for the structural model

Path relationship	**VIF**
Trust in the government → Public Trust	2.370
Trust in the energy sector → Public Trust	3.645
Trust in product and service quality -> Public Trust	2.784
Trust in Research & Development → Public Trust	1.978
Social Trust → Public Trust	4.854
Public Trust → Perceived Community Benefits	1.437
Technology Perceptions → Perceived Community Benefits	1.219
Safety Perceptions → Perceived Community Benefits	1.463
Production Perceptions → Perceived Community Benefits	1.302
Perceived Community Benefits → Domestic Hydrogen Acceptance	1.000
Domestic Hydrogen Acceptance → Willingness to Adopt H2 Home	1.000

12 Supplementary Note 12: Results for the trust-based model

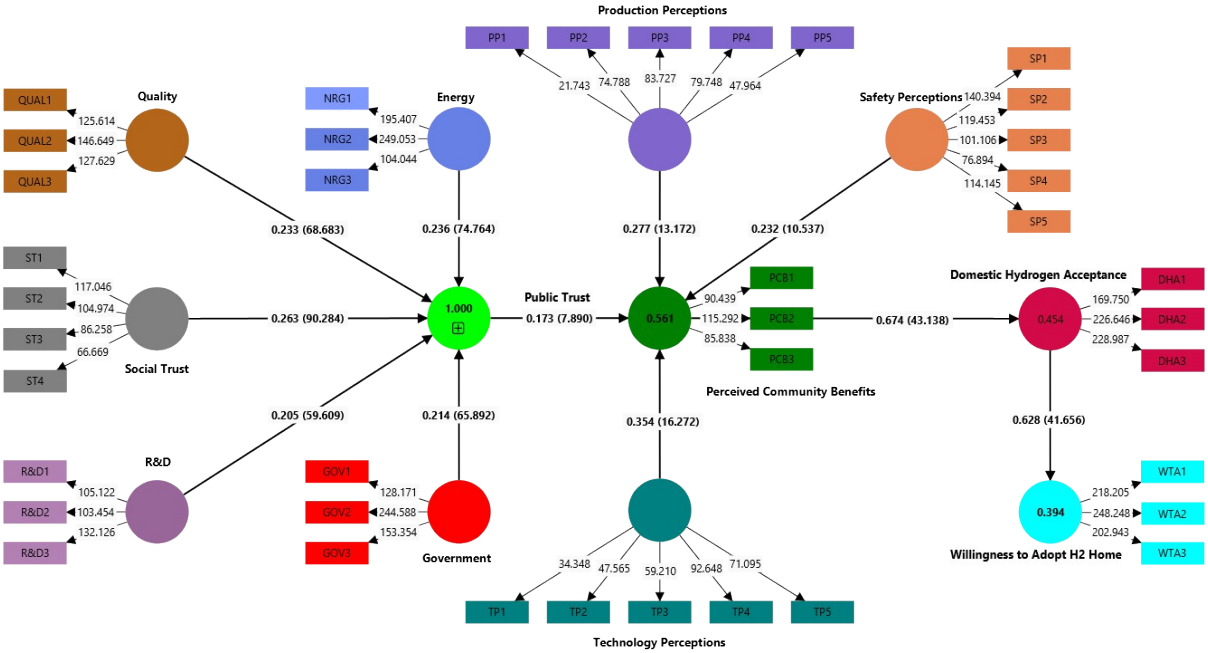

Fig. S5 Structural model path coefficients with t-values for the inner and outer models.

13 Supplementary Note 13: NCA Parameters for public trust

Supplementary Note 13 displays the bottleneck values for the predictors of public trust.

Table S7. Bottleneck tables showing actual values from IMPA for enabling public trust (CR-FDH)

Target outcome	Threshold IMPA values per construct				
PT	**GOV**	**NRG**	**QUAL**	**R&D**	**ST**
0.00	NN	NN	NN	NN	NN
9.67	NN	NN	NN	NN	NN
19.35	NN	NN	NN	NN	NN
29.02	NN	NN	3.02	NN	NN
38.69	NN	4.12	15.89	7.41	3.21
48.37	NN	19.00	28.77	21.00	18.58
58.04	NN	33.84	41.65	34.58	34.00
67.71	22.23	48.68	54.52	48.17	49.33
77.39	45.89	63.52	67.40	61.75	64.71
87.06	69.50	78.36	80.28	75.34	80.08
96.73	93.10	93.20	93.16	88.93	95.46

14 Supplementary Note 14: NCA Parameters for perceived community benefits

Supplementary Note 14 displays the bottleneck values for the predictors of perceived community benefits.

Table S8. Bottleneck tables showing actual values from IMPA for enabling perceived community benefits (CR-FDH)

Target construct	Threshold IMPA values per construct			
PCB	**PT**	**TP**	**SP**	**PP**
0	NN	NN	NN	NN
10	NN	NN	NN	NN
20	NN	NN	NN	NN
30	NN	NN	1.47	4.09
40	NN	NN	4.38	9.22
50	NN	NN	7.29	14.35
60	NN	0.28	10.20	19.48
70	7.32	13.35	13.10	24.61
80	14.78	26.41	16.01	29.74
90	22.24	39.47	18.92	34.87
100	29.71	52.54	21.83	40.00

15 Supplementary Note 15: Combined importance-performance map analysis for perceived community benefits

Supplementary Note 15 provides the data values for conducing combined importance-performance map analysis for perceived community benefits.

Table S9. Parameters for combined importance-performance map analysis for reaching 100% perceived community benefits

Construct	Bottleneck percentage	Importance	Performance
Technology Perceptions	17.51	0.354	69.627
Production Perceptions	5.42	0.277	63.849
Safety Perceptions	3.31	0.232	58.677
Public Trust	10.57	0.173	52.002
Mean	9.20	0.259	61.036

16 Supplementary Note 16: NCA Parameters for domestic hydrogen acceptance and willingness to adopt a hydrogen home

Supplementary Note 16 displays the bottleneck values for the domestic hydrogen acceptance and willingness to adopt a hydrogen home.

Table S10. Bottleneck tables showing actual values from IMPA for enabling domestic hydrogen acceptance and willingness to adopt domestic hydrogen before 2030 (CR-FDH)

Target construct	Threshold IMPA values	Target construct	Threshold IMPA values per construct
DHA	**PCB**	**WTA**	**DHA**
0	NN	0	NN
10	NN	10	NN
20	NN	20	NN
30	NN	30	NN
40	NN	40	NN
50	NN	50	5.64
60	6.07	6	15.03
70	15.86	70	24.42
80	25.65	80	33.90
90	35.44	90	43.19
100	45.23	100	52.57

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