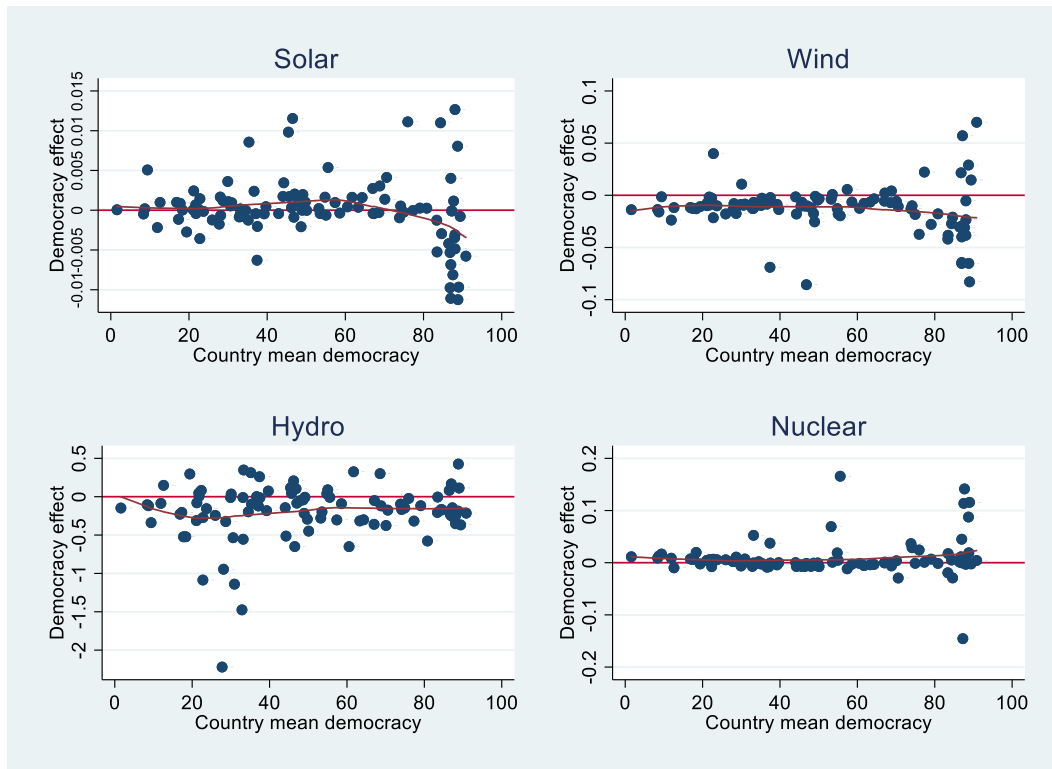**Supplementary Information**

Supplementary Figure S1: Random country effects of democratization on low carbon energy shares as a function of country mean democracy (1980—2020).

Note: Points represent country-specific democracy effects of a one-point increase in a country's V-Dem score on the percentage share of the energy source of the total energy deployed for electricity generation.
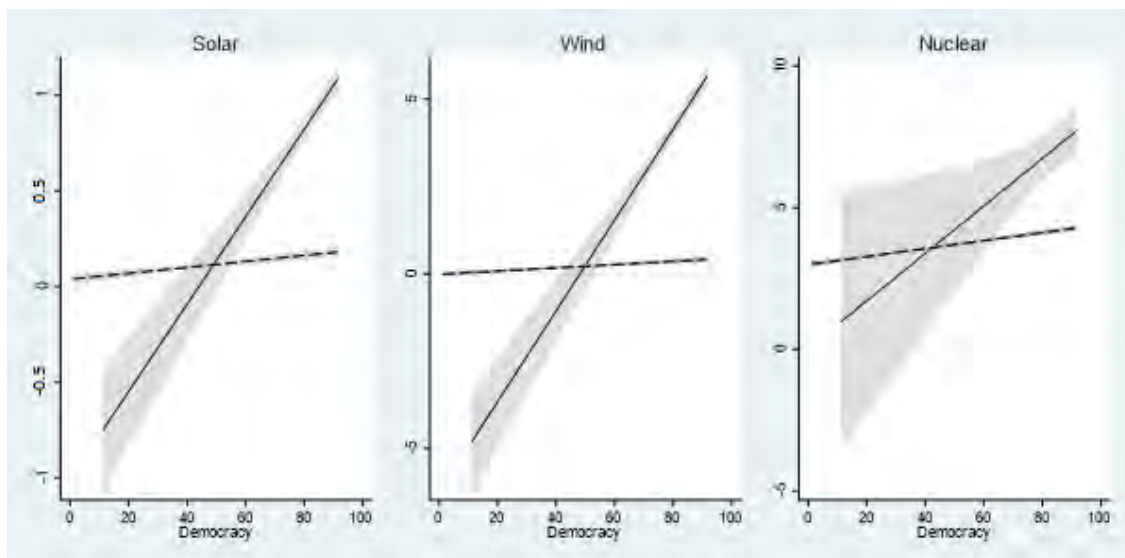
Figure S2: Predicted democracy- solar, wind and nuclear energy share schedules for OECD and non-OECD countries. Solid lines represent OECD, dashed lines non-OECD countries. Shaded regions are 95% confidence intervals.

Figure 2 depicts the predicted democracy – energy share relationships for OECD and non-OECD countries for the energy sources with significant interaction terms using the results from Table 5. All energy schedules slope upwards, indicating that democratization tends to be associated with increasing shares of solar, wind and nuclear energy. Yet differences between the slopes of the OECD (solid) and non-OECD (dashed) schedules suggests that the strength of the relationship varies widely across countries at different levels of economic development. For all three energy sources, the OECD lines are steeper than the non-OECD lines, suggesting that democratization is more conducive to low carbon energy deployment in advanced economies. While these trends cohere with our previous findings for nuclear energy, the stronger positive relationships predicted for OECD (vs. non-OECD) countries for wind and solar contradicts our conclusion from the third model that economic development increases the inhibitory effect of democracy on small scale low carbon energy technologies. The R^2 values obtained for models 3 and 4 (without and with the interaction effect) provide a clue for resolving the puzzle. When the economic development – democracy interaction is included (model 4), the R^2 value increases by a negligible amount (1%) in the solar and wind models, compared to a 26% increase in the nuclear model. Collectively, these results imply that economic development has a more determinative influence on the effect of democratization on nuclear energy use relative to solar and wind energy. In other words, our results suggest that factors other than economic development appear to be more influential in moderating the effect of democracy on solar and wind energy shares compared to nuclear energy.

Supplementary Table S1: Descriptive statistics.

Variable	Mean	SD
Energy share		
Solar	0.21	0.01
Wind	0.81	0.05
Hydro	31.49	0.46
Nuclear	5.41	0.19
Democracy		
V-Dem	50.36	0.41
FH	47.96	0.43
P2	63.59	0.52
Lagged deployment		
Solar	416.78	60.45
Wind	1518.56	172.14
Hydro	19602.71	903.87
Nuclear	15749.52	995.11
Population growth	1.51	0.02
GDP per capita	10505.22	223.54
GDP growth	3.56	0.09
Resource rent	7.20	0.16
Manufacturing	29.84	0.19
Services	51.04	0.18
Total electricity generation	123617.50	7448.60

Supplementary Table S2: Drivers of solar and wind energy shares using alternative measures of democracy.

Robustness tests: choice of democracy proxy

Parameter		Solar				Wind			
	Proxy	FH		P2		FH		P2	
	Model	3	4	3	4	3	4	3	4
Fixed effects									
Democracy		-2.67E-3*	4.12E-3**	3.41E-4	-7.82E-4	-0.01T	-0.02***	-1.65E-3	-0.01**
Lagged depl.		7.68E-5***	7.60E-6***	1.00E-3	1.00E-4***	6.58E-5***	6.07E-6***	7.39E-5***	6.95E-5***
Pop growth		-0.03	-0.02	-0.06***	-0.04**	-0.26***	-0.16**	-0.24***	-0.14**
GDP per cap		2.41E-5***	3.87E-7	1.81E-5***	3.12E-6	1.31E-4***	-4.44E-5**	1.19E-4***	-5.61E-6
GDP growth		9.61E-4	5.93E-4	1.35E-3	-1.18E-3	3.45E-3	2.92E-3	3.78E-3	4.43E-3
Resource rent		1.69E-3	1.89E-3	2.51E-5	-2.90E-3	1.82E-3	3.90E-3	0.01	0.01
Manuf. share		-0.01***	-0.01**	-0.01**	-2.53E-3	-0.03**	6.67E-4	-0.04***	-0.01
Services		0.01***	0.01***	2.31E-3	3.40E-3T	0.02*	0.03**	0.02**	0.03**
Total elec. gen.		-5.76E-7***	-5.33E-7***	-4.77E-7***	-4.62E-7***	-1.82E-6***	-1.23E-6***	-1.78E-6***	-1.35E-6***
DemXGDP_percap		-	3.20E-7***	-	1.95E-7***	-	2.41E-6***	-	1.55E-6***
Random effects									
Country dem. var.		2.66E-5***	3.12E-6***	1.69E-5***	1.79E-5***	1.02E-3***	1.17E-3***	5.40E-4***	7.15E-4***
Country variance		0.07***	0.04***	0.01***	2.89E-20	1.09***	2.09E-15	0.85***	1.04E-11***
Country-year var.		0.78***	0.78***	0.57***	0.57***	7.47**	7.33***	6.35***	6.17***
LR test		375.48***	381.46***	322.66***	337.87***	1316.76***	1411.56***	1186.60***	1291.85***
R2 (or equiv.)		0.22	0.22	0.28	0.28	0.20	0.21	0.29	0.30
N		3694	3694	3587	3587	3694	2694	3587	3587

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Note: Democracy is operationalised using Freedom House data in the FH models and P2 data from the Polity IV index in the P2 models. Model 3 is the RCM regression without interaction effects and model 4 is the RCM with interaction effects (as presented in Table 3 in the main text).

Supplementary Table S3: Drivers of hydro and nuclear energy shares using alternative measures of democracy.

Parameter		Hydro				Nuclear			
	Proxy	FH		P2		FH		P2	
	Model	3	4	3	4	3	4	3	4
Fixed effects									
Democracy		-0.06	-0.08T	-0.11**	-0.11**	0.01	0.01	0.01*	0.01*
Lagged depl.		1.66E-5	1.47E-5	6.43E-6	5.37E-6	9.57E-5***	9.51E-5***	9.75E-5***	9.76E-5***
Pop growth		1.19***	1.24***	1.41***	1.42***	-0.07	-0.08	-0.06	-0.07
GDP per cap		-1.73E-4***	-4.80E-6***	-1.76E-4***	-2.91E-4**	-2.43E-6***	4.65E-5T	-2.74E-5***	1.77E-5
GDP growth		0.01	0.01	2.07E-3	3.29E-3	9.670E-4	3.99E-4	0.01	0.01
Resource rent		0.02	002	2.31E-3	3.13E03	-0.01	-0.01	-0.01	-0.01
Manuf. share		-0.19***	-0.16***	-0.20***	-0.19***	0.02T	0.02	0.01	0.01
Services		-0.26***	-0.25***	-0.28***	-0.27***	0.01	0.01	0.01	0.01
Total elec. gen.		-2.82E-6	-2.07E-6	-1.18E-6	-8.50E-7	-2.53E-6***	-2.61E-6***	-2.36E-6***	-2.43E-6***
DemXGDP_percap		-	4.03E-6***	-	1.25E-6	-	-9.01E-7***	-	-4.96E-7*
Random effects									
Country dem. var.		0.15***	0.15***	0.08***	0.08***	4.77E-3***	4.63E-3***	6.58E-4***	6.57E-4*
Country variance		1287.90***	1262.00***	1210.06***	1205.10***	120.39***	119.34***	123.96***	124.32***
Country-year var.		63.94***	63.66***	70.10***	70.03***	7.18***	7.17***	7.37***	7.35***
LR test		9737.35***	8685.52***	8164.88***	8124.54***	8555.39***	8562.67***	8222.41	8225.67***
R2 (or equiv.)		0.32	0.32	0.25	0.25	0.62	0.62	0.61	0.61
N		3694	3694	3587	3587	3694	3694	3587	3587

Note: Democracy is operationalised using Freedom House data in the FH models and P2 data from the Polity IV index in the P2 models. Model 3 is the RCM regression without interaction effects and model 4 is the RCM with interaction effects (as presented in Table 4 in the main text).