Predicting Polar vs. Non-Polar

Electron Domains	Bonding Domains	Lone-Pair Domains	Geometry	Compound	Polar or Non-Polar
2	2	0	linear	AX_2	NP
				AXY	P
3	3	0	trig. planar	AX_3	NP
				AX_2Y	P
3	2	1	bent	AX_2	P
				AXY	P
4	4	0	tetrahedral	AX_4	NP
				AX_3Y	P
				AX_2Y_2	P
4	3	1	trig. pyrm.	AX_3	P
				AX_2Y	P
4	2	2	bent	AX_2	P
				AXY	P
5	5	0	trig. bipyrm.	AX_5	NP
				AX_4Y	P
				AX_3Y_2	NP (if axial Ys)
5	4	1	see-saw	AX_4	P
				AX_3Y	P
				AX_2Y_2	P
5	3	2	T-shaped	AX_3	P
				AX_2Y	P
5	2	3	linear	AX_2	NP
				AXY	P
6	6	0	octahedral	AX_6	NP
				AX_5Y	P
				AX_4Y_2	NP (Y trans), P (Y cis)
				AX_3Y_3	P (fac or mer)
6	5	1	sq. pyrm.	AX_5	P
				AX_4Y	P
				AX_3Y_2	P
6	4	2	sq. planar	AX_4	NP
				AX_3Y	P
				AX_2Y_2	NP (trans), P (cis)