The problem *Decisive Subset (DS)* is in NP because we can check in polynomial time that a given subset of committee members is of size at most k, and that its voting outcome is the same as that of the whole committee.

Now we show that *Vertex Cover* $\leq_P$ *DS*. Given a graph $G = (V, E)$ and bound k, we create an issue I_e for each edge e, and a committee member m_v for each node v. If $e = (u, v)$, then we have members u and v vote "yes" on issue I_e, and all other committee members abstain. Note that the voting outcome by the whole committee on all issues is "yes." We now ask whether there is a decisive subset of size at most k.

If there is a decisive subset S of size at most k, then it must lead to an affirmative decision for each issue. In particular, this means that for each edge e, S must include at least one of the members m_u or m_v, and so the corresponding set of nodes will constitute a vertex cover in G of size at most k.

If there is a vertex cover C of size at most k, then for each edge $e = (u, v)$, at least one of u or v will be in C. For the set S of members corresponding to C, the voting outcome will thus be "yes" on each issue I_e, so S is decisive.

[1] ex7.111.521