






-  Case (i): Edges on the $v_{\text{pay}}-x$ path.
-  Case (ii): Edges on the $x-v_{\text{opt}}$ path.
-  Case (iii): Edges on the $x-\hat{v}_{\text{pay}}$ path.
-  Case (iv): Other edges of the component.
-  Edges not in the component.