



Lekhotla la Taolo ea Motlakase Lesotho

MELAOANA E HOLIM'A TSEBELISO E NEPAHETSENG EA MOTLAKASE MALAPENG



Karolo ea marang-rang a phephelo ea motlakase malapeng

Tse Kahar'a Tokomane

leqephe

1. Boemo ba Tlhahiso Leseling ka Motlakase	3
2. Selelekela.....	4
3. Litemoso.....	4
3.1 Mokhahlelo oa pele.....	5
3.1.1 Lifuthumatsi tsa Metsi.....	5
3.1.2 Lihatsetsi.....	6
3.1.3 Lik'homphuthara.....	7
3.1.4 Lisebelisoa tsa Mashala.....	7
3.1.5 Ho Pheha.....	7
3.1.6 ho Hlatsoa Llijana.....	8
3.1.7 Ho Otlolla Liphahlo.....	9
3.1.8 Ho Belisa Metsi.....	9
3.1.9 Lifuthumatsi tsa moea.....	10
3.2 Mokhahlelo oa Bobeli.....	10
3.2.1. Mabone a CFL.....	11
3.2.2 Smarttrips.....	11
3.2.3 Lipompo tsa Metsi a Chesang.....	11
3.2.4 Kobo ea Motlakase.....	11
3.3 Mokhahlelo oa Boraro.....	12
3.3.1 Lishaoara.....	12
3.3.2 Li-thermostat.....	12
3.3.3 Sefuthumatsi sa Metsi ka Letsatsi	

1. BOEMO BA TLHAHISO-LESELING KA TS'EBELISO EA MOTLAKASE LESOTHO

E meng ea mesebetsi ea mantlha ea Lekhotla la Taolo ea Motlakase Lesotho (LEA) ke ho bona hore hoba le nts'etso pele ea lefapha la motlakase ka mokhoa o bolokehileng. Lefapha lena la motlakase hore le tle le sebetse hantle ka nepo, e'ngoe ea lintlha tse ts'oanetseng ho eloa hloko, ke ts'ebeliso e ntle ea motlakase. Khaolo ea mashome a mararo a metso e ts'eletseng (36) ea Laksense eo LEA e e fileng K'hamphani ea Lesotho ea Motlakase (LEC) ke hore e rute basebelisi ba motlakase ho o sebelisa hantle 'me e be le melao (likeletso) e bonts'ang hore motlakase o ka sebelisoa hantle joang. Melao eo e ts'oanetse ho kenyeletsa likaroloana tse latelang:

a) Mosebelisi oa motlakase o ts'oanetse ho fumants'oa litaba tsohle, ntle ho tefello, tse bontsang hore motlakase o ka sebelisoa ka nepo joang. Litaba tseo li ts'oanetse hore li be li ngotsoe tokomaneng ebile ele tse ananetsoeng ke LEA.

b) Ho ts'oanetse hore ho phatlalatsoe ke litsi tse fanang ka lits'ebeletso tsa motlakase, mehloli eohle ea litaba tsa tsebeliso e ntle ea motlakase 'moho le ea mehala ea lipuisano ea lifono, e ka rutang basebelisi ba motlakase ka ts'ebeliso e ntle ea motlakase.

c) Mosebelisi oa motlakase o tlameha ho fumants'oa litokomane tse mo rutang ka libaka tse ling tsohle kahar'a naha moo a ka fumanang leseli ka ts'ebeliso e ntle ea motlakase ntle ho tefello ea letho ho latela kopo ea hae. Hape moreki oa motlakase o ts'oanetse ho lumelloa ho tseba lithuso tseo ebang 'Muso ka makala a ona o li entse hore motlakase o tle o sebelisoa hantle e le ho ruta sechaba ka mekhoha eo.

K'hamphani ea LEC ho tloha ka Tsitoe, 2006, ha e so etse tsena tse boletsoeng ka holimo. Melaoana (likeletso) ena e hlahang mona e entsoe ke LEA molemong oa ho hlokomelisa basebelisi ba motlakase ka ts'ebeliso e nepahetseng ea motlakase. Sena se ka thusa ho theola litheko tsa phehlo le tsamaiso ea motlakase kahara naha le litheko tsa motlakase ka kakaretso. Hape melaoana ena ke karolo ea Laksense ea LEC joalokaha ho boletsoe kaholimo.

Hape, ka ho ngola tokomane ena, LEA e tlatselletsa liteko tsa Lekalana la Tsa Matla (Department of Energy) ho ruta sechaba ka kakaretso ka litaba tsa ts'ebeliso ea motlakase ka makhetha.

2. SELELEKELA

Matla a ka hlalosoalele bokhoni ba ho etsa mosebetsi. Ka tsela ena, matla a hlokahala malapeng le li khoebong. Lifemeng motlakase ke ona o jereng khoebo. Motlakase ke ntho e bobebe e ts'ireletsehileng ho ka sebelisoa malapeng. Leha ho le joalo, ka lebaka la maemo a leholimo a fetohang nako le nako le moruo o fokolang lefaats'eng ka bophara, ho bohlokoa hore motlakase o sebelisoa hantle ele ho fokotsa litjeo tsa ho o hlahisa le ho sireletsa tikoloho.

Litaba tse monate ke hore mekhoea e mengata ea ho boloka matla a motlakase. Ekaba ka ho etsa liphetoho tse fokolang malapeng a rona, liofising tsa ts'ebetso le tsela tsa rona tsa bophelo re ka bolokang chelete ra etsa phetoho moruong oa rona le oa lefats'e ka bophara. Ena ke melaoana e ka re thusang ho sebelisa motlakase hantle malapeng. Ho hlokomeloe ke babali hore, melaoana e ka thusang baji ba motlakase ba baholo (joalo ka lifeme) ho baballa motlakase e fapane le ena. Leha ho le joalo, e meng ea melaoana eka thusang ts'ebelising e ntle ea motlakase malapeng e ka thusa le likhoebong tse kholo. Ka tsela e ts'oanang melaoana e meng eka sebelisoang ke ba likhoebo e ka sebelisoa le malapeng.

3. LITEMOSO TSE AMANANG LE TSEBELISO EA MOTLAKASE MALAPENG

Karolo ena ke e holima mekhoea e ka sebelisoang malapeng ele ho fokotsa sekhahla seo motlakase o ka sebelisoang ka teng 'me ele mokhoea oa ho baballa chelete. Mekhoea ena e hlalositsoe ka mekhahlelo e meraro e latelang:

Mokhoea o bobebe ka ho fetisisa:

Mona ho hlalosoalele taba feela ea ho fetola litloaelo tse itseng. Mosebelisi o tlosa lisebelisoa tsa motlakase ts'ebelising kapa o etsa ho hong ho bobebe.

Mokhoea o bobebenyana:

Mona mosebelisi oa motlakase o etsa mosebetsi o itseng. Ka nako e 'ngoe mosebelisi o tlameha ho reka thepa e itseng ea motlakase.

Mokhoea o bobebe:

Mona mosebetsi o hloka ho etsoa 'me o ka nka lihoranyana tse itseng ho qeta ts'ebetso.

Mekhoa ena e ka holimo e ka aroloa ka mekhahlelo e meraro ho latela hore na mokhahlelo ka bonngoe o ka thusa ho boloka motlakase le litjeo joang.

Mokhahlelo oa pele o thusa ho boloka motlakase ka tsela e tlase, ka linoko tse leshome lekholong (10%) ea litjeo tsa motlakase.

Mokhahlelo oa bobeli o thusa ho boloka ka tsela e mahareng ho isa ho linoko tse mashome a mararo lekholong (30%) ka litjeo tse tlase ho M1, 000.00

Mokhoa oa boraro o boloka ka tsela e holimo ho isa ho linoko tse mashome a mahlano lekholong (50%) kamehla haeba mosebela a rekile thepa ea motlakase e bolokang matla a motlakase.



Thapo ea motlakase le socket ea eona

3.1 MOKHAHLELO OA PELE.

3.1.1 Lifuthumatsi tsa metsi (geysers) li ts'oanetse ho behoa mochesong o tlaase.

Sefuthumatsi sa metsi (geyser) ke sona se sebelisang motlakase haholo ho feta thepa tse ling tsa motlakase. Geyser e baka ho isa ho 40% ea lits'enyehelo tsa motlakase ka khoeli malapeng.

Mohato oa pele ke ho fokotsa mofuthu oa geyser ho tloha ho mashome a supileng lekholong a li Celsius (70°C) ho tla ho mofuthu oa mashome a tseletseng lekholong a li Celsius a mocheso (60°C).

Geyser e ts'oanetse ho tingoa pele batho ba ea mesebetsing, e laetoe hape bosiu pele ho boroko 'me sena se tla boloka motlakase le ho qoba hore motlakase o 'ne o khaohe ka nako tse ling (outages).

Ho sebelisa shaoara (shower) ho boloka motlakase ho feta ho hlapela ka bateng hoba ho sebelisoa metsi a fokolang a futhumetseng. Motho ha a qeta ho sebelisa metsi a fokolang joaloka ho hlapa matsoho, a koalise pompo, metsi a futhumetseng a se senyehe feela.

3.1.2 Lihatsetsi (refridgerators) li ts'oanetse ho behoa maemong a tlaase

Batho ba ts'oanetse ho hlokomela hore ha sehatsetsi se bata haholo, se hloka ho sebelisa motlakase o mongata ka tsela e ts'oanang. Mofuthu oa sehatsetsi o ts'oanetse ho nyolloa e le ho boloka matla. Khothaleto ke hore sehatsetsi se behoe mofuthung oa lipakeng tsa 2°C - 4°C. Hape mamati a lihatsetsi a ts'oanetse ho lula a koetsoe, a se buloe leha ho sa hlokahale. Sena se ka boloka 25% ea motlakase.



Sehatsetsi se sebelisoang malapeng

3.1.3 K'homputhara ea lapeng (computer) e tsoanetse e tingoe ha e sa sebelisoa

Batho ba bangata ba nahana hore ha ho na le sets'oants'o se lulang se hlahile leboteng la k'homphuthara e ntse e sa sebelisoa, motlakase oa bolokeha. Sets'oants'o seo se sireletsa sefahleho sa k'homphuthara. K'homphuthara e lokeloa ho tingoa ka hohle-hohle, le lipolakeng (plugs) ha e sa sebelisoa, e le ona feela mokhoa oa ho boloka motlakase.

3.1.4 Nts'a lisebelisoa tse phahamisang mollo lisebelisoeng tsa motlakase (battery chargers).

Ke lintho tse ngata tse hokeloang motlakaseng bosiu, e kaba lifono, li-camera', joalo-joalo. Lintho tsena li sebelisa motlakase o sa feteng 5%, empa batho ba li tlohella motlakaseng nako e telele 'me hoo ha ho boloke motlakase. Hona ho bolela hore 95% ea matla ke e senyehang. Batho ba tlameha ho ela hloko hore ba nts'e lisebelisoa tse akhang tse boletsoeng, hang ha li tletse.



Fono-fono e tlatsoang leshala ka motlakase

3.1.5 Lisebelisoa tsa ho pheha tse nyane li sebelisa motlakase o fokolang

Ho pheha ka lisebelisoa tsa motlakase tse nyane ho boloka motlakase haholo hobane ho e na le sebaka se senyane se ts'oanetseng ho lula se futhumetse (joaloka maifo). Empa haele lisebelisoa tse kholo li sebelisa motlakase haholo hobane sebaka se seholo se lokeloang ho lula se futhumetse. Hape ho pheha ka lipane tse nyane tse lekanang leifo ho boloka motlakase. Mohlala, microwave e sebelisa halofo ea motlakase o ka sebetsang setofong se tloaelehileng.



Mochini oa microwave

3.1.6 Hlatsoa lijana kapa liaparo ka mokhoa o bolokang matla

U ka boloka matla ka ho hlatsoa liaparo kapa lijana ha li se li le ngata li ka tlala ka moo li ts'eloang ka mochini hobane ha li ka ts'eloa li fokola, thepa ea motlakase e hlatsoang e sebelisa metsi le matla a lekanang leha li tletse. Ho boloka matla ho omisa liaparo ka terata ho feta ho li omisa ka mochini oa motlakase.



Mochini o hlatsoang liaparo

3.1.7 Otlolla liaparo (iron) tse ngata ka nako ele 'ngoe

Thepa ea motlakase e otlolang liaparo (iron) e sebelisa matla haholo ebile e sala e futhumetse leha e se e tlositsoe motlakaseng. Mokhoa oa ho boloka matla ke oa ho otlolla liaparo tse ngata ka nako e le 'ngoe hobane iron ha e ea tlameha ho besoa hangata. Ho ka otlolloa liaparo tse bobebe leha iron e tlositsoe motlakaseng.

3.1.8 Belisa metsi a lekaneng ka ketlele

Mosebelisi oa motlakase a ka boloka matla ka ho belisa metsi a hlokahalang feela ka ketlele. Ke ts'enyoe ea motlakase ho belisa metsi a tletseng ketlele empa ho tl'o sebelisoa a fokolang.



Ketlele ea motlakase e sebelisoang lapeng

3.1.9 Sebelisa lifuthumatsi tsa moea (space heaters) ka tsela e bolokang motlakase

Batho ba ts'oanetse ho apara ho latela maemo a leholimo. Ha ho bata, batho ba apare lijesi kapa tsona likobo ho qoba le ho besa lifuthumatsi ka nako tsohle. Haele hlabula, batho ba tsoanetse ho beha mohatsela oa lisebelisoa tsa motlakase tse etsang serame pakeng tsa 18[°]c-22[°]. Mohatsela o ka tlase ho 18[°]c o senya motlakase.



Sefuthumatsi sa moea ofising

3.2 MOKHAHLELO OA BOBELI

3.2.1 Sebelisa mabone a bolokang motlakase a CFL

Mabone ana a bolokang motlakase a boloka matla lipakeng tsa 75% le 80% ho feta a tloaelehileng. A ka sebelisoa nakong e itseng, makhetlo a leshome ho feta a tloaelehileng. Mabone ana a bitsoa **compact fluorescent lamps (CFLs)**. Le ona mabone ana a mefuta 'me mofuta o mong le o mong o lokeloa ho sebelisoa ka nepo e le ho boloka motlakase.

3.2.2 Sebelisa thepa ea motlakase e thusang ho boloka matla thepeng tsa motlakase tse sa bolokeng matla leha li tlositsoe motlakaseng. (Smart trips)

Hona le thepa ea motlakase e sebelisang motlakase leha e tlositsoe motlakaseng (vampire loads), 'me ho boloka matla ho ts'oanetse ho sebelisoa (smart strips). Haeba thepa e joalo ea motlakase e ts'oanetse ho lula e hoketsoe, ho molemo ho sebelisa smart strips ele hore ha motlakase o tima e be ha o sa sebetsa thepeng eo.



Thelefishini

3.2.3 Apesa sefuthumatsi sa metsi (geyser) le lipompo tsa metsi (water pipes) ka ntho e sireletsang mofuthu ho baleha

Apesa sefuthumetsi sa metsi le lipompo tsa metsi ka kobo. Masoba ohle a liphaepheng tse nts'ang metsi a futhumetseng a ts'oanetse ho koaloa ho boloka matla.

3.2.4 Sebelisa kobo ea motlakase (electric blanket) ho futhumetsa bethe

Kobo ea motlakase e sebelisa motlakase o monyane ho feta ha ho besitsoe sefuthumatsi. Hape kobo eo e theko e tlase. Kobo ena e ts'oanetsoe e hokeloe motlakaseng nako ea halofo ea hora pele motho a robala, 'me kamora moo ebe ea tingoa bosiu bohle.

3.3 MOKHAHLELO OA BORARO

3.3.1 Ts'ebeliso ea lishower tse metsi a phallang butle.

Ha ho ka sebelisoa mefuta ena ea lishaoara (showers), metsi le motlakase li ka bolokeha. Tlas'a maemo a tloaelehileng, shaoara ka motsotso e nts'a lilithara (litres) tse robeli tsa metsi empa ha ho ka sebelisoa shaoara tse nts'ang metsi hanyane ho ka sebelisoa halofo ea metsi ao ka nako e ts'oanang.

3.3.2 Ts'ebeliso ea ts'epe ea motlakase e futhumetsang metsi e itimang le ho sebetsa ka nako e itseng. (Programmable thermostat) e bohlokoa

Ho se ho boletsoe hore geyser ke eona thepa ea motlakase e sa bolokeng matla malapeng. Mefuta ena ea ts'epe ea ho futhumatsa metsi e khothaletsoang e ts'oanetse ho sebelisoa hoba ha e tlamehe ho tingoa ke motho ka nako ea teng. Ha nako e fihlile feela e ea itima ka boeona.

3.3.3 Sebelisa lifuthumatsi tsa metsi ka letsatsi

Lifuthumatsi tsena li ka sebelisoa ho eketsa metsi a futhumetseng malapeng, 'me li ka sebetsa le lifuthumatsi tse kholo tsa metsi. Sefuthumatsi sena se sebetsa ka matla a letsatsi ho futhumetsa metsi 'me metsi ana a boloka mofuthu nako e telele leha letsatsi le sa chaba. Leha lifuthumatsi tsena li le holimo ka litjeo, empa motlakase ona oa bolokeha. Mokhoa o mong oa ho boloka motlakase ke oa hore sefuthumatsi se joalo se hokeloe moo metsi a futhumetseng a hlahang teng.

